SHARP Service Manual

ATSM380004RCS

APSS
Auto Program Search System

STEREO CASSETTE TAPE RECORDER

MODELS GF-6060H GF-6060E

PHOTO: GF-6060H

In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.

SPECIFICATIONS

GENERAL

Type:	Portable stereophonic cassette tape recorder with built-in LW/MW/SW/FM 4-band radio	
Power source:	AC 110 ~ 120 V/220 ~ 240 V, 50/60 Hz DC 12 V (Eight UM/SUM-1, R20, HP2 batteries or external DC supply)	
Speakers:	12 cm (Woofer) x 2 Horn type (Tweeter) x 2	
Output power:		
GF-6060H; (DIN 45 324)	MPO	7600 mW (3800 mW + 3800 mW) on AC
	RMS	5400 mW (2700 mW + 2700 mW) on DC
GF-6060E;	MPO	10000 mW (5000 mW + 5000 mW) on AC
	RMS	5400 mW (2700 mW + 2700 mW) on DC, 10% Distortion
Semiconductors:	5 ICs 17 transistors 19 diodes 2 LEDs 1 LED array	
Dimensions:		
Width;	450 mm (17-3/4″)	
Depth;	125 mm (5″)	
Height;	258 mm (10″)	
Weight:	5 kg (11 lbs) without batteries	

TAPE RECORDER SECTION

Tape:	Phillips-type compact cassette tape
Tape speed:	4.8 cm/sec.
Frequency response:	50 ~ 12000 Hz using CrO$_2$ tape
Signal/Noise ratio:	50 dB
Wow and flutter:	
GF-6060H;	0.28% (DIN 45 511)
GF-6060E;	0.28% (CCIR)
Input sensitivity and input impedance:	
External mic;	600 ohms
Mixing mic.;	600 ohms
Record/Playback Socket;	0.7 mV/5.6K ohms
Output level and loading impedance:	
Headphones;	8 ohms ~ 25 ohms
External speakers;	7 ohms ~ 8 ohms
Record/Playback Socket;	0.7V/50K ohms

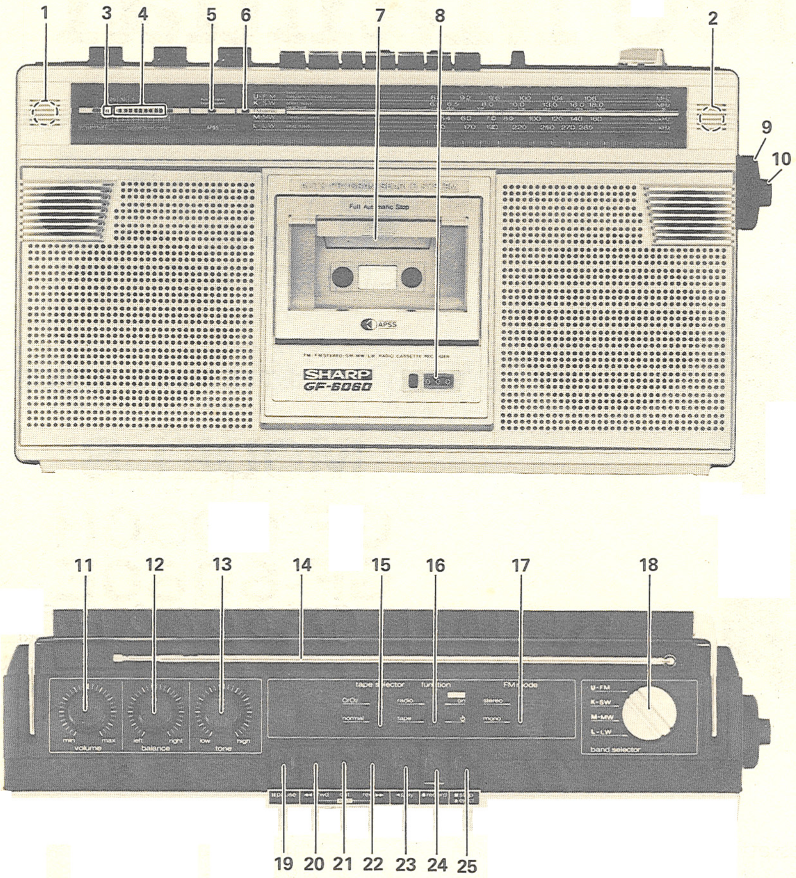
RADIO SECTION

Frequency range:	LW;	150 kHz ~ 285 kHz
	MW;	520 kHz ~ 1620 kHz
	SW;	5.95 MHz ~ 18 MHz
	FM;	87.6 MHz ~ 108 MHz

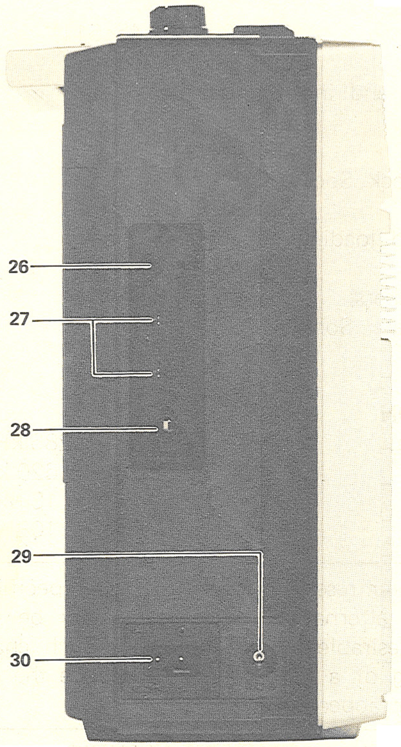
The manufacturer reserves the right to vary specifications, design, or use alternative materials as may be deemed necessary or desirable at any time, any such change or variations being of a kind as not to reduce the quality, performance or appearance.

SHARP CORPORATION OSAKA, JAPAN

NAMES OF PARTS (PHOTO: GF-6060H)



1. Built-in Microphone (L-ch)
2. Built-in Microphone (R-ch)
3. Power On/Battery Level Indicator
4. Level Indicator
5. APSS Indicator
6. FM Stereo Indicator
7. Cassette Holder
8. Digital Tape Counter
9. Tuning Control
10. Fine Tuning Control
11. Volume Control
12. Balance Control
13. Tone Control
14. FM/SW Telescopic Rod Antenna
15. Tape Selector
16. Function Selector
17. FM Mode Selector
18. Band Selector
19. Pause Key
20. Fast-forward/Cue/Forward APSS Key
21. APSS Cut Key
22. Rewind/Review/Reverse APSS Key
23. Playback Key
24. Record Key
25. Stop/Eject Key
26. Mixing Microphone Socket
27. External Speaker Sockets
28. Headphones Socket
29. External DC Power Supply Socket
30. AC Power Supply Socket
31. Remote Control Socket
32. External Microphone Sockets
33. Battery Compartment Lid
34. Beat Cancel Switch
35. Record/Playback (AMP) Socket



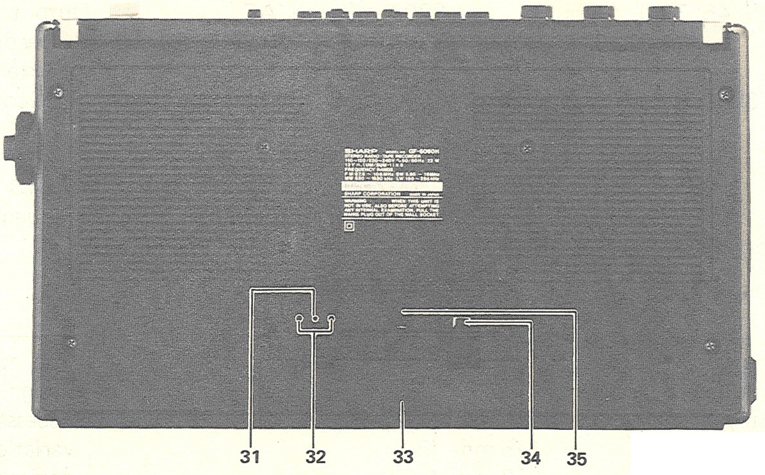


Figure 2

DISASSEMBLY (PHOTO: GF-6060H)

Caution: Prior to the disassembly, be sure to remove the power supply cord plug, cassette tape, battery and adaptor from the unit.

■ FRONT CABINET REMOVAL (Refer to Figure 3–1)

1. Remove the seven (7) screws — at the rear of the unit — retaining the front cabinet.
2. Push the stop/eject key to open the cassette holder.
3. Detach the front cabinet, and withdraw the three (3) tips.

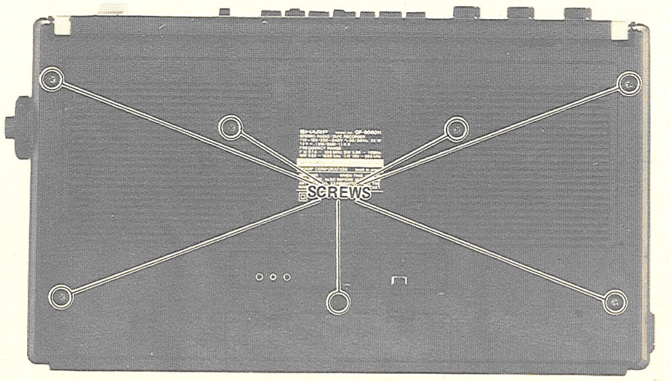


Figure 3–1

■ MECHANISM BLOCK REMOVAL (Refer to Figure 3–2)

1. Detach the dial scale plate.
2. Remove the four (4) screws retaining the mechanism block.
3. Disconnect the three (3) sockets (CNS101, CNS102, CNS103) and the one (1) tip from the PWB, then the mechanism block can be removed.

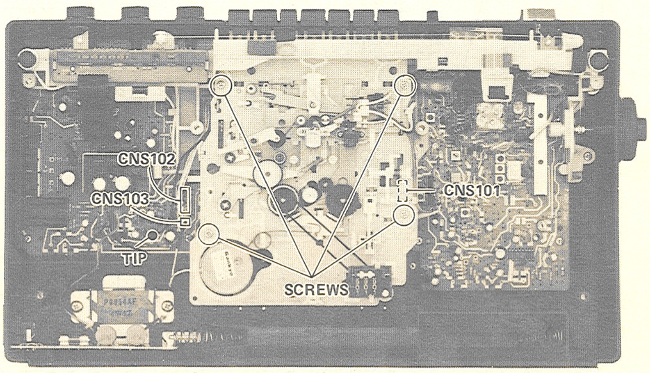

CNS102
CNS103
TIP
SCREWS
CNS101

Figure 3–2

■ CHASSIS (PWB) REMOVAL (Refer to Figure 3–3)

1. Take the six (6) knobs off.
2. Disconnect the three (3) tips from the PWB.
3. Remove the seven (7) screws retaining the amp./tuner PWB, then it can be removed from the back cabinet.

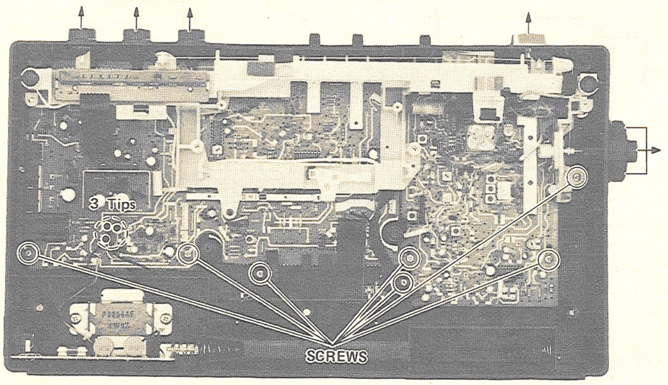

3 Tips
SCREWS

Figure 3–3

VOLTAGE SELECTION

Before operating the unit on mains, check the preset voltage. If the voltage is different from your local voltage, adjust the voltage as follows: Slide the AC power supply socket cover by a little loosing two screws to the visible indication of the side of your local voltage. See Figure 3–4.

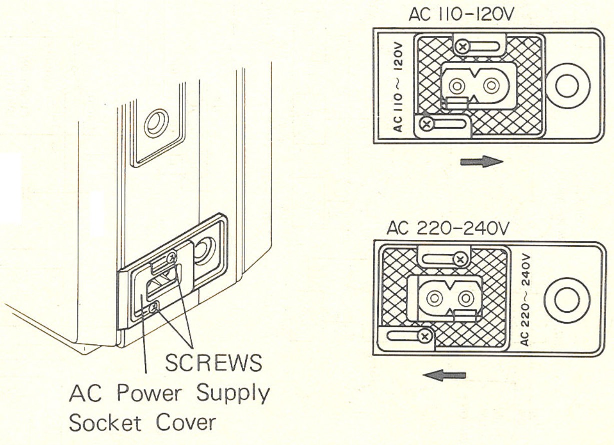

AC 110–120V
AC 110~120V
AC 220–240V
AC 220~240V
SCREWS
AC Power Supply
Socket Cover

Figure 3–4

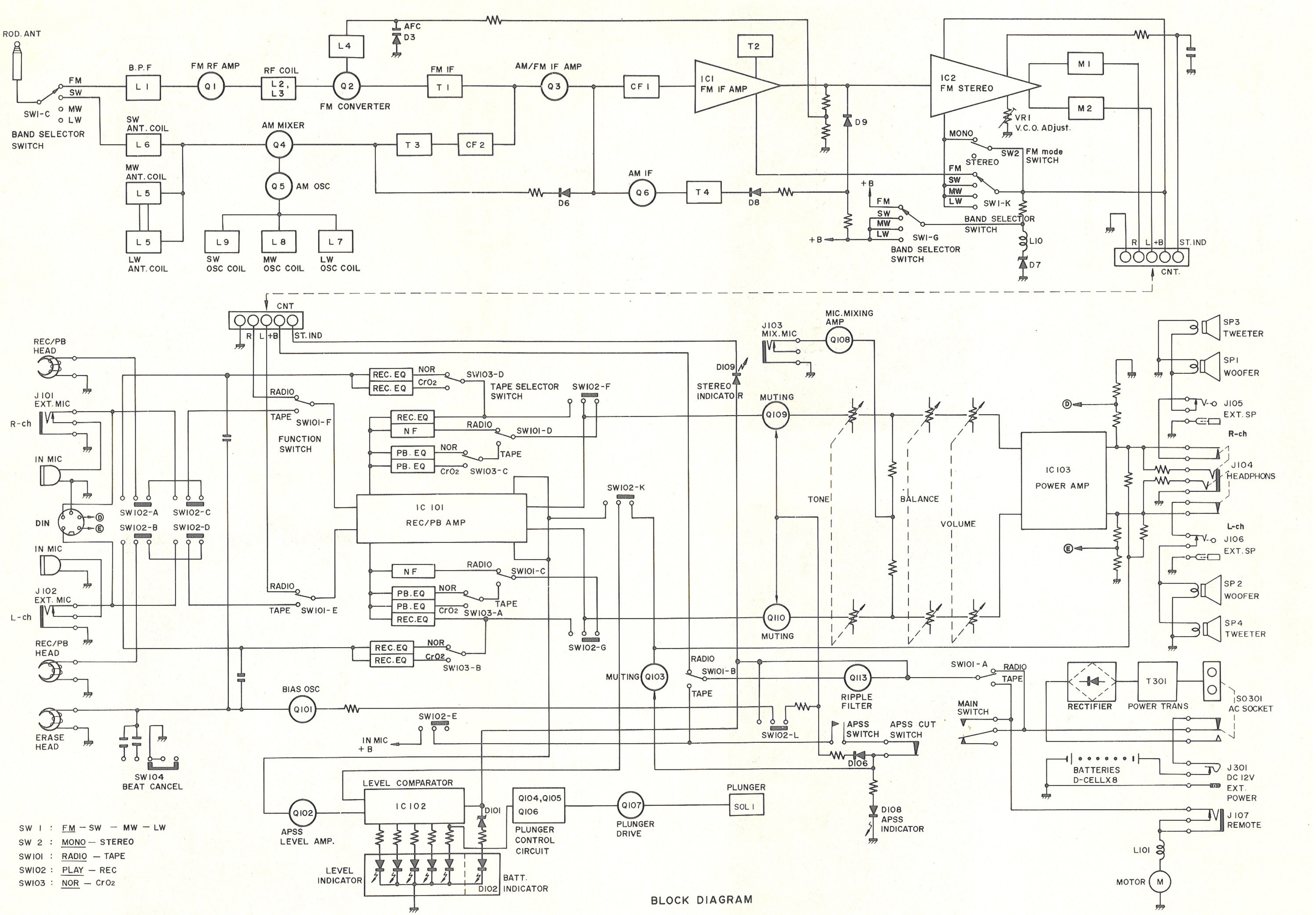

ROD. ANT
FM
SW
MW
LW
SW1-C
BAND SELECTOR SWITCH
B.P.F
L1
FM RF AMP
Q1
RF COIL
L2, L3
L4
AFC
D3
Q2
FM CONVERTER
FM IF
T1
AM/FM IF AMP
Q3
CF1
IC1 FM IF AMP
T2
IC2 FM STEREO
M1
M2
VR1 V.C.O. ADjust.
MONO
STEREO
SW2 FM mode SWITCH
SW1-K
BAND SELECTOR SWITCH
SW1-G
BAND SELECTOR SWITCH
+B
L10
D7
D9
D6
D8
SW ANT. COIL
L6
AM MIXER
Q4
T3
CF2
MW ANT. COIL
L5
LW ANT. COIL
Q5
AM OSC
AM IF
Q6
T4
L9
SW OSC COIL
L8
MW OSC COIL
L7
LW OSC COIL
R
L
ST. IND
CNT.
CNT
REC/PB HEAD
J101 EXT. MIC
R-ch
IN MIC
DIN
D
E
J102 EXT. MIC
L-ch
ERASE HEAD
SW102-A
SW102-B
SW102-C
SW102-D
SW104 BEAT CANCEL
REC. EQ
NOR
CrO2
SW103-D
TAPE SELECTOR SWITCH
RADIO
TAPE
SW101-F
FUNCTION SWITCH
SW101-E
NF
SW101-D
PB. EQ
SW103-C
IC 101 REC/PB AMP
SW101-C
SW103-A
SW103-B
SW102-F
SW102-G
SW102-K
SW102-E
IN MIC +B
BIAS OSC
Q101
Q102
APSS LEVEL AMP.
LEVEL COMPARATOR
IC102
D101
LEVEL INDICATOR
D102
BATT. INDICATOR
Q104, Q105 Q106
PLUNGER CONTROL CIRCUIT
Q107
PLUNGER DRIVE
PLUNGER
SOL 1
D109
STEREO INDICATOR
J103 MIX. MIC
MIC. MIXING AMP
Q108
MUTING
Q109
Q110
Q103
TONE
BALANCE
VOLUME
SW101-B
Q113
RIPPLE FILTER
SW102-L
APSS SWITCH
APSS CUT SWITCH
D106
D108
APSS INDICATOR
IC103 POWER AMP
SP3 TWEETER
SP1 WOOFER
J105 EXT. SP
J104 HEADPHONS
J106 EXT. SP
SP2 WOOFER
SP4 TWEETER
SW101-A
MAIN SWITCH
RECTIFIER
T301
POWER TRANS
S0301 AC SOCKET
BATTERIES D-CELLX8
J301 DC 12V EXT. POWER
J107 REMOTE
L101
MOTOR
M
SW1 : FM — SW — MW — LW
SW2 : MONO — STEREO
SW101 : RADIO — TAPE
SW102 : PLAY — REC
SW103 : NOR — CrO2
BLOCK DIAGRAM

Figure 4 BLOCK DIAGRAM

POWER IC (IC103) REPLACEMENT

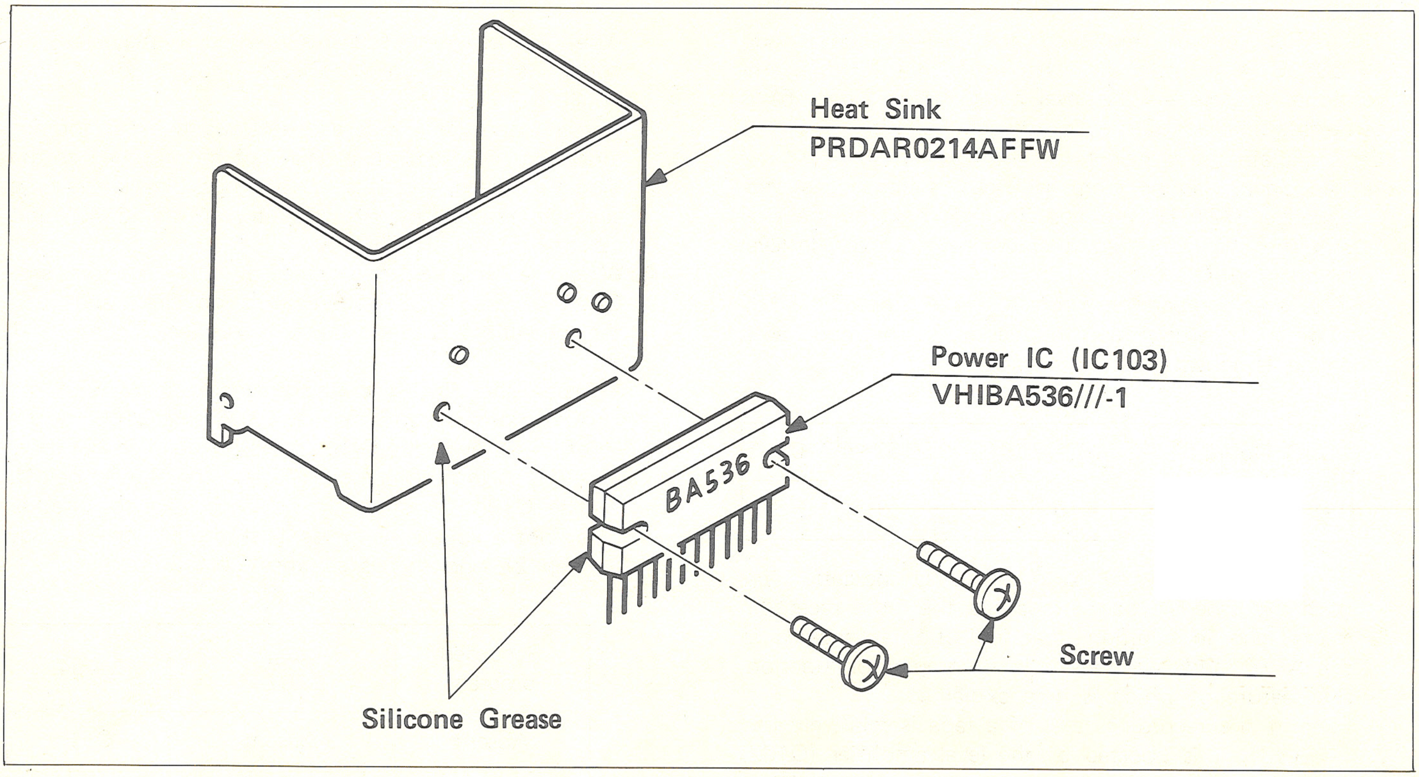

Heat Sink
PRDAR0214AFFW
Power IC (IC103)
VHIBA536///-1
BA536
Screw
Silicone Grease

Figure 5–1

DIAL CORD STRINGING

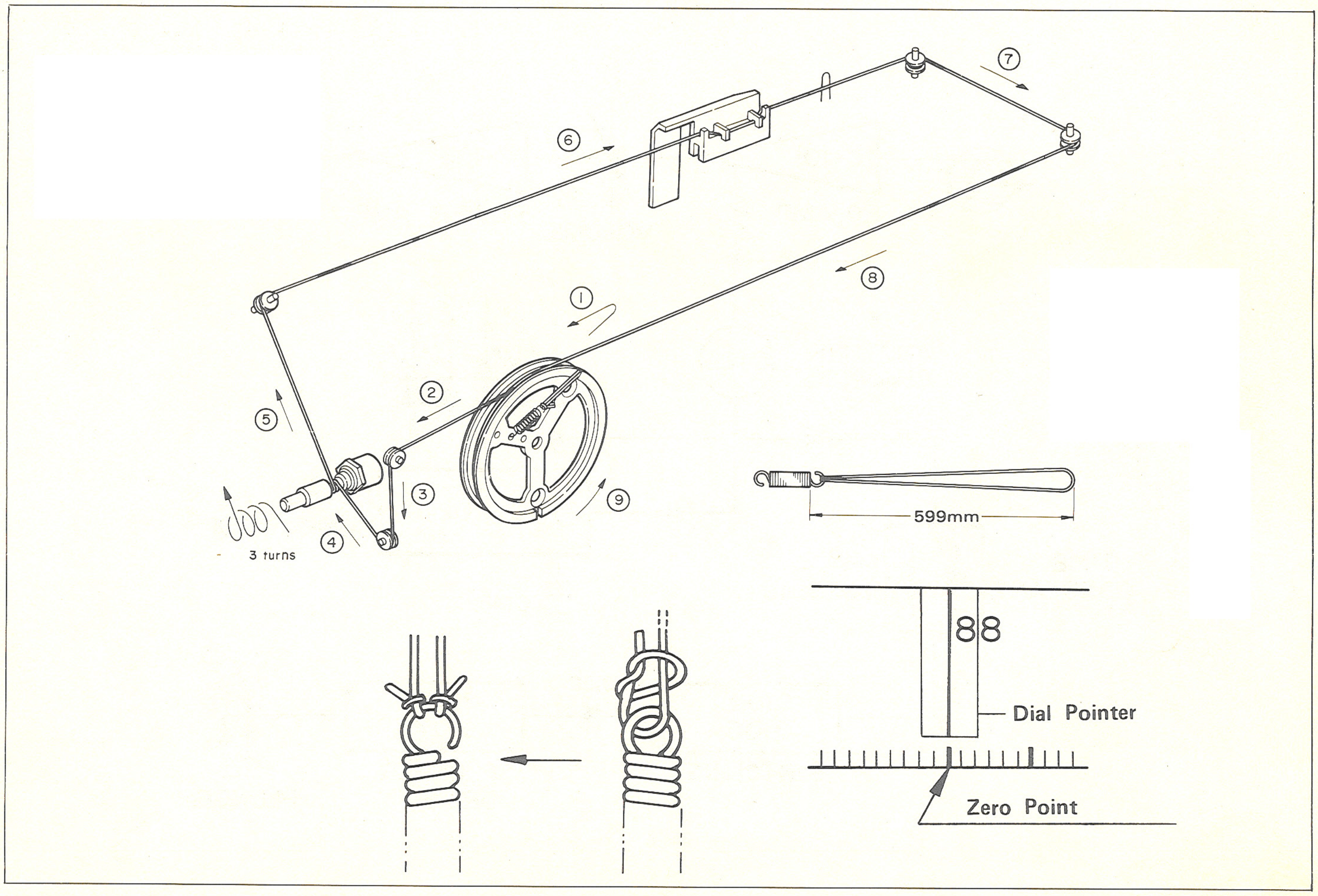

⑦
⑥
⑧
①
②
⑤
③
⑨
④
3 turns
599mm
88
Dial Pointer
Zero Point

Figure 5–2

EXPLANATIONS OF APSS AND ALC

■ APSS

The APSS circuit employed for the GF-6060H and GF-6060E is a little different from that for the conventional models — the level comparator (Figure 6) is comprised instead of the limiter and Schmitt.

Let's explain the behaviors of the new APSS.

1. The signal coming from the head is boosted by the equalizer (IC101) amplified first and next by the level amplifier (Q102), then it enters pin ③ of the level comparator (IC102).
2. The level comparator works to make the LEDs D102 (1 to 5) light according to a variety of the input level, which is shown:

LED No.	D102–1	D102–2	D102–3	D102–4	D102–5
Level (dB)	–20	–10	–5	0	+3

The unit is designed to provide VU indication for both the tape playback mode and the radio reception mode, and in addition, that indication is allowed in the APSS mode via the said level comparator function, the feature of which is here explained:

Even if the recording level of a tape is relatively low (–30 dB), it is boosted by the level amplifier (Q102) to permit the VU indication — in this case, the D102–1 can light assuming that the recording level is within the range from –30 dB to –40 dB.

When the programs space is reached in playback, no voltage is applied to the D102–1 for it not to light at all.

3. For the non-signal recorded part which exists for not more than 0.5 second, it shall not be mistaken as the programs space, and this is made possible via the time constant assured by the capacitor (C146, C149) and resistors (R164, R165).
4. When the APSS switch is placed at "ON" the transistor Q105 of the APSS circuit turns on first, and then the operation goes on as follows. See Figures 7–1 thru 7–4.
   1) When the unit is in the playback mode with the APSS switch kept off, the Q104 and Q105 remain off — though the C152 is charged (shown in Figure 7–1), so that both the Q106 and the plunger be off.
   2) The Q104 turns on or off according to whether or not a voltage is present at the D 102–1 (see Step 2), and this is summed up;

Recorded program	Voltage at D102–1	Q104
Absent	Absent	OFF
Present	Present	ON

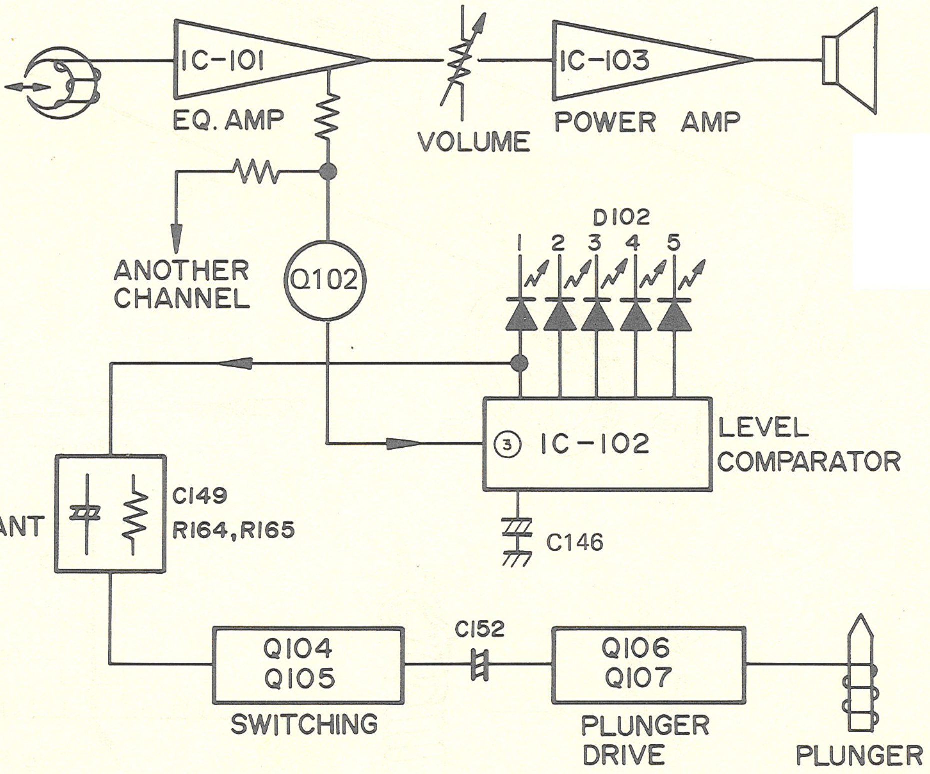


Figure 6

3) In the case the APSS switch is pushed on just when the programs space (non-signal recorded part) is being traced in playback:
Here, the Q104 is kept off (see Figure 7–2), and assuming the charging of C152 is not yet completed, the Q106 turns on to permit the timer standby mode. If the tape advances to the signal recorded part, the Q104 turns on and the C152 discharges (see Figure 7–3). Then, if the tape reaches the programs space, the Q104 turns off, a current is caused at the C152, the Q106 turns on, and the plunger is activated (see Figure 7–4).

4) In the case the APSS switch is pushed on just when the signal (program) recorded part is being traced in playback:
The Q104 turns on (Figure 7–3), and if the programs space is reached, the plunger will be on as shown in Figure 7–4.

5) Besides with the APSS switch on, the Q103 turns on to stop (mute) the VU signal coming from the power amplifier (IC103).

■ ALC (Automatic Level Control)

The ALC feature is provided by the level comparator (IC102). DC voltage at pin ⑭ of the IC102 varies — in a linear form — according to the strength of input, and the resultant voltage is applied to pin ⑯ of the record/playback amplifier (IC101).
D105 serves as a buffer for the ALC time constant circuit (C147, R151) — without the function of rectification.

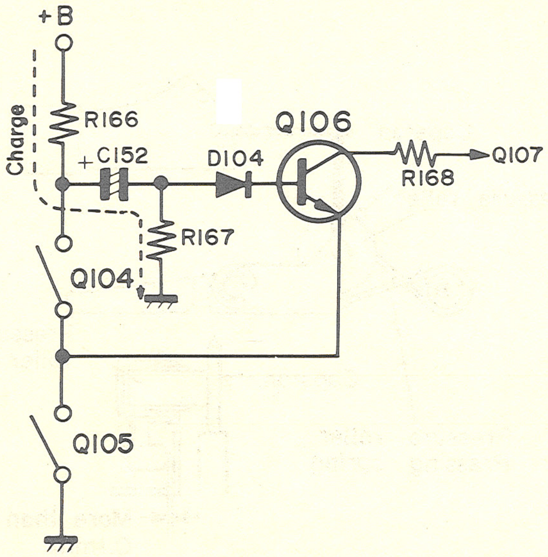

+B
Charge
R166
+C152
D104
Q106
R168
Q107
R167
Q104
Q105

Figure 7–1

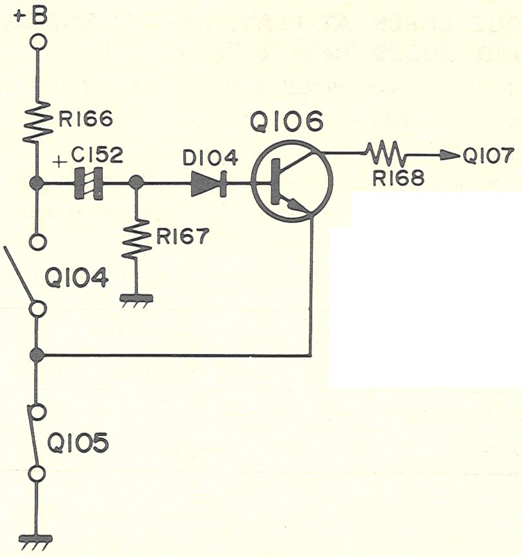

+B
R166
+C152
D104
Q106
R168
Q107
R167
Q104
Q105

Figure 7–2

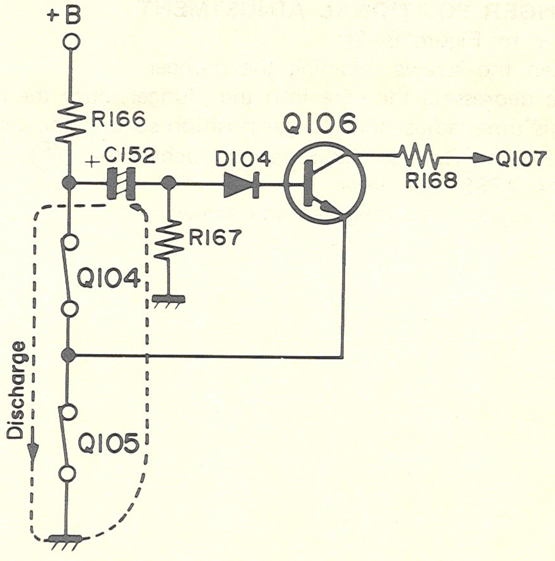

+B
R166
+C152
D104
Q106
R168
Q107
R167
Q104
Discharge
Q105

Figure 7–3

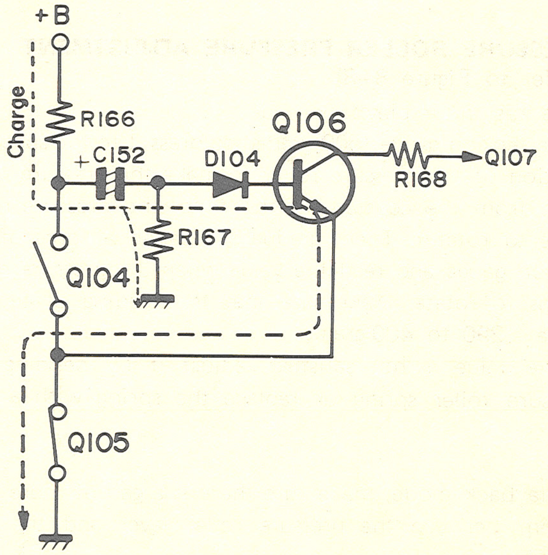

+B
Charge
R166
+C152
D104
Q106
R168
Q107
R167
Q104
Q105

Figure 7–4

MECHANISM ADJUSTMENT

■ TORQUE CHECK AT PLAY, FAST FORWARD AND REWIND MODES (Refer to Figure 8–1)

1. Set a torque measuring reel to the turntable (to the take-up side at play or fast forward mode and to the supply side at rewind mode).
2. Then, gradually weaken a force of the tension gauge and read the torque value when the rotation speed of the turntable becomes nearly constant.
3. The torque values in each mode are as specified below.

Mode	Torque value
Play	35 ~60 gram. cm
Fast forward	70 ~100 gram. cm
Rewind	70 ~ 100 gram. cm

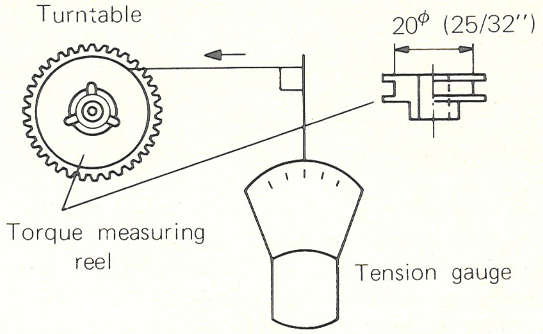

Turntable
20φ (25/32")
Torque measuring reel
Tension gauge

Figure 8–1

■ PLUNGER POSITIONAL ADJUSTMENT (Refer to Figure 8–2)

1. Loosen the screws retaining the plunger.
2. While depressing the core into the plunger, push the key. In this time, adjust the plunger position so that the pin on the Rewind/Reverse APSS lever touches the Ⓐ part of the APSS lock lever.
3. After adjustment, retighten the screws.

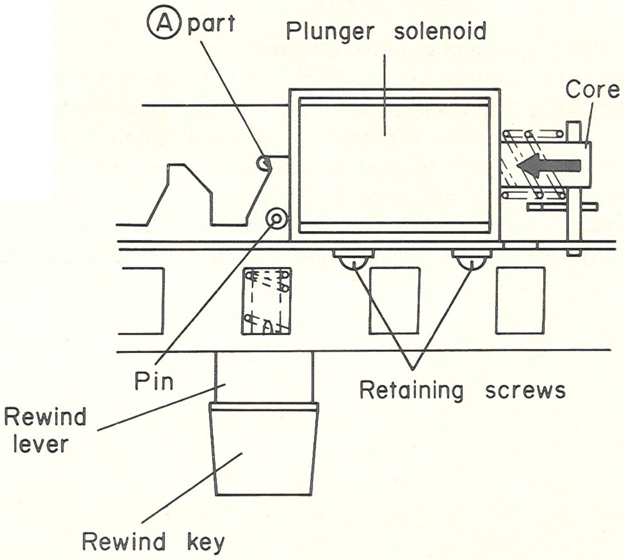

Ⓐ part
Plunger solenoid
Core
Pin
Retaining screws
Rewind lever
Rewind key

Figure 8–2

■ PRESSURE ROLLER PRESSURE ADJUSTMENT (Refer to Figure 8–3)

1. Place this unit in playback mode.
2. Use a tension gauge (500 grams) to press it to the specified position of the pressure roller to make the pressure roller apart from the capstan (at the time, the pressure roller stops to rotate). Then, gradually weaken a force of the tension gauge and read the value when the pressure roller begins to rotate. Make sure that the reading of tension gauge is 290 to 400 grams.
3. If the value is not satisfied, adjust it by bending the pressure roller spring or replace the spring with a new one.

Notes:

In playback mode, make sure there is a gap of more than 0.1mm between the pressure roller lever and the sub-chassis.

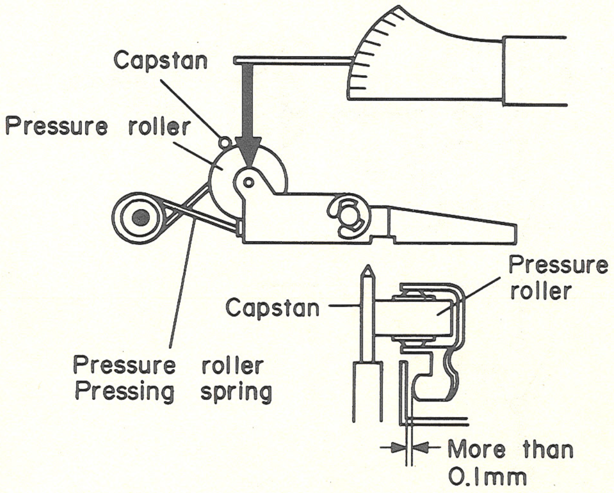

Capstan
Pressure roller
Pressure roller
Capstan
Pressure roller Pressing spring
More than 0.1mm

Figure 8–3

■ PAUSE TIMING ADJUSTMENT (Refer to Figure 9–1)

1. Place this unit in playback mode. Then, check the gap between the pin on the pause lever and pause lock lever. The gap should be more than 0.2mm.
2. Next, push the pause key slowly and check that the pressure roller and take-up idler are simultaneously apart from the capstan and take-up turntable.
3. If it is not satisfied in step 2, adjust it by bending the Ⓐ part of the pause lever.

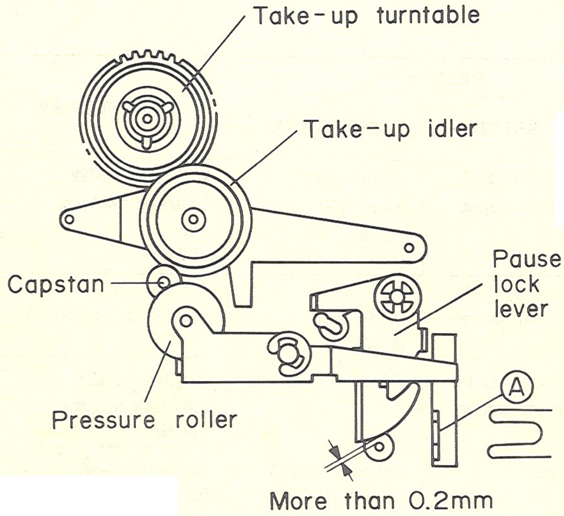

Take-up turntable
Take-up idler
Capstan
Pause lock lever
Ⓐ
Pressure roller
More than 0.2mm

Figure 9–1

■ TAPE SPEED ADJUSTMENT (Refer to Figure 9–2)

1. Connect a frequency counter, across a resistor (8 ohms, 2 W, ±5%), to the EXT. speaker socket (J105 or J106).
2. Play a test tape (MTT-111; –10 dB, 3 kHz) at its start and end points, and adjust the semi-variable resistor so that the frequency counter reads 2955 to 3040 Hz — using a bladed screwdriver via the hole at the motor's bottom.

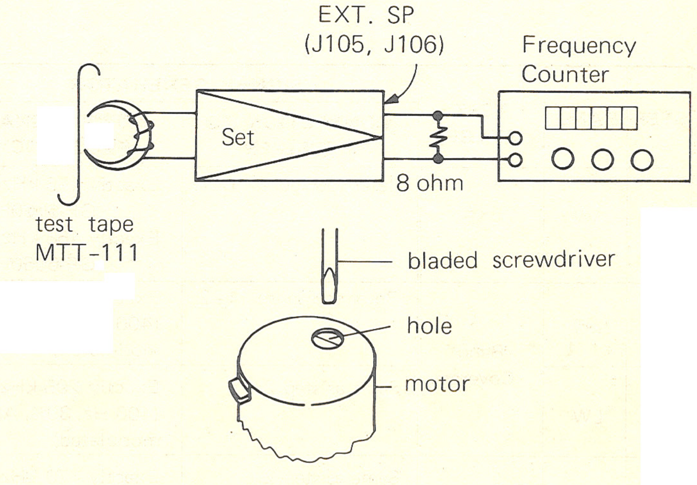

EXT. SP
(J105, J106)
Frequency Counter
Set
8 ohm
test tape
MTT-111
bladed screwdriver
hole
motor

Figure 9–2

■ RECORD/PLAYBACK HEAD AZIMUTH ADJUSTMENT (Refer to Figure 9–3).

1. Connect load resistor (8 ohm) to the External Speaker Jacks (J105, J106) and connect outputs of both the right and left channels to the vertical and horizontal input terminals of oscilloscope.
2. Set the Volume Control in the maximum and Tone Control in the fully clockwise.
3. Insert the test tape (MTT-113, 6.3 kHz, –10 dB Recorded).
4. Place the unit in PLAYBACK mode.
5. Adjust the head azimuth adjustlng screw so that Lissajou's waveform attains the maximum and the same phase in right and left.
6. Even without using the oscilloscope, also adjust the head azimuth adjusting screw so that outputs of both the right and left channels attain the maximum and the same phase in right and left.

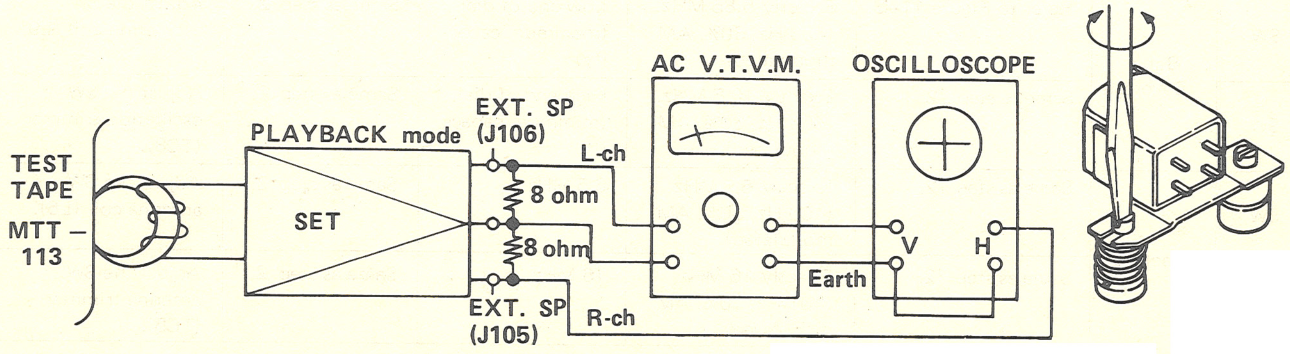

TEST TAPE
MTT – 113
PLAYBACK mode
SET
EXT. SP
(J106)
L-ch
8 ohm
8 ohm
EXT. SP
(J105)
R-ch
AC V.T.V.M.
OSCILLOSCOPE
V
H
Earth

Figure 9–3

GENERAL ALIGNMENT INSTRUCTION

Should it become necessary at any time to check the alignment of this receiver, proceed as follows;

1. Set the volume control (VR101-C) to maximum.
2. Attenuate the signals from the generator enough to swing the most sensitive range of the output meter.
3. Use a non-metallic alignment tool.
4. Repeat adjustments to insure good results.
5. Set the Function Selector Switch (SW101) to "radio" position.

AM IF/RF ALIGNMENT

STEP	BAND	TEST STAGE	SIGNAL GENERATOR		RECEIVER		ADJUSTMENT
			CONNECTION TO RECEIVER	INPUT SIGNAL FREQUENCY	DIAL SETTING	REMARKS	
1	MW	IF	Refer to Figure 11–1.	Exactly 455 kHz: GF-6060H Exactly 468 kHz: GF-6060E	High end of dial. (minimum capacity)	Adjust for best "IF" curve	Adjust the MW IF transformers. (T3) (T4)
2	LW	Band Coverage	Refer to Figure 11–2.	Exactly 145 kHz. (400 Hz, 30%, AM modulated)	Low end of dial. (maximum capacity).	Adjust for maximum output.	Adjust the LW oscillation coil (L7).
3	LW		Same as step 2.	Exactly 295 kHz. (400 Hz, 30%, AM modulated)	High end of dial. (minimum capacity).	Same as step 2.	Adjust the LW oscillation trimmer (TC6).
4	LW	Tracking	Same as step 2.	Exactly 170 kHz. (400 Hz, 30%, AM modulated)	170 kHz.	Same as step 2.	Adjust the LW bar antenna coil (L5). See Note A.
5	LW		Same as step 2.	Exactly 270 kHz. (400 Hz, 30%, AM modulated)	270 kHz.	Same as step 2.	Adjust the LW antenna trimmer (TC3). See Note A.
6	LW	Repeat steps 2, 3, 4, and 5 until no further improvement can be made.					
7	MW	Band Coverage	Same as step 2.	Exactly 510 MHz. (400 Hz, 30%, AM modulated)	Low end of dial. (maximum capacity)	Same as step 2.	Adjust the MW oscillation coil (L8).
8	MW		Same as step 2.	Exactly 1650 kHz. (400 Hz, 30%, AM modulated)	High end of dial. (minimum capacity)	Same as step 2.	Adjust the MW oscillation trimmer (TC7).
9	MW	Tracking	Same as step 2.	Exactly 600 kHz. (400 Hz, 30%, AM modulated)	600 kHz.	Same as step 2.	Adjust the MW bar antenna coil (L5). See Note A.
10	MW		Same as step 2.	Exactly 1400 kHz. (400 Hz, 30%, AM modulated)	1400 kHz.	Same as step 2.	Adjust the MW antenna trimmer (TC4).
11	MW	Repeat steps 6, 7, 8 and 9 until no further improvement can be made.					
12	SW	Band Coverage	Refer to Figure 11–3.	Exactly 5.85 MHz. (400 Hz, 30%, AM modulated)	Low end of dial. (maximum capacity)	Same as step 2.	Adjust the SW oscillation coil (L9).
13	SW		Same as step 12.	Exactly 18.5 MHz. (400 Hz, 30%, AM modulated)	High end of dial. (minimum capacity)	Same as step 2.	Adjust the SW oscillation trimmer (TC8).
14	SW	Tracking	Same as step 12.	Exactly 6.5 MHz. (400 Hz, 30%, AM modulated)	6.5 MHz.	Same as step 2.	Adjust the SW antenna coil (L6).
15	SW		Same as step 12.	Exactly 16 MHz. (400 Hz, 30%, AM modulated)	16 MHz.	Same as step 2.	Adjust the SW antenna trimmer (TC5).
16	SW	Repeat steps 12, 13, 14 and 15 until no further improvement can be made.					

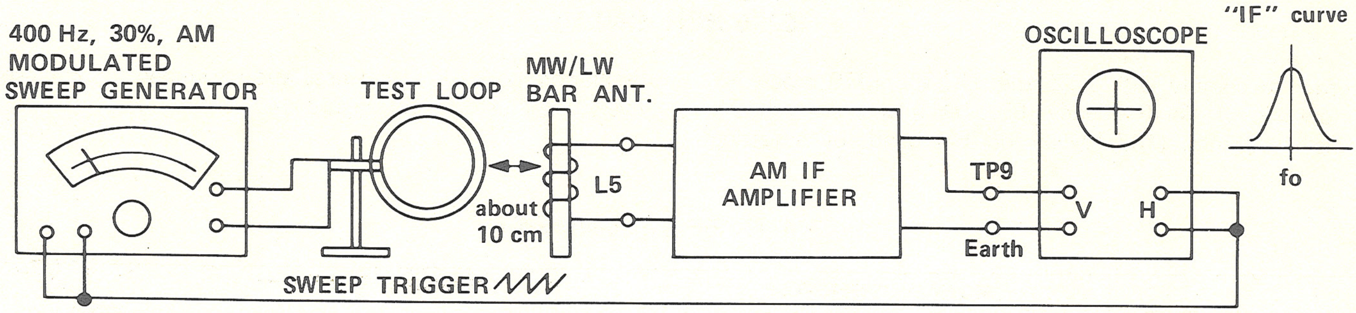

400 Hz, 30%, AM
MODULATED
SWEEP GENERATOR
TEST LOOP
MW/LW
BAR ANT.
L5
about
10 cm
AM IF
AMPLIFIER
TP9
Earth
OSCILLOSCOPE
V
H
"IF" curve
fo
SWEEP TRIGGER

Figure 11–1

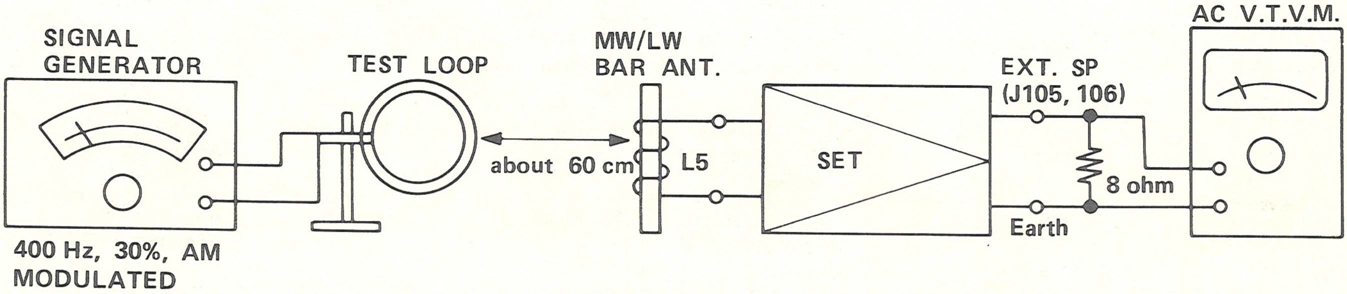

SIGNAL
GENERATOR
400 Hz, 30%, AM
MODULATED
TEST LOOP
MW/LW
BAR ANT.
about 60 cm
L5
SET
EXT. SP
(J105, 106)
8 ohm
Earth
AC V.T.V.M.

Figure 11–2

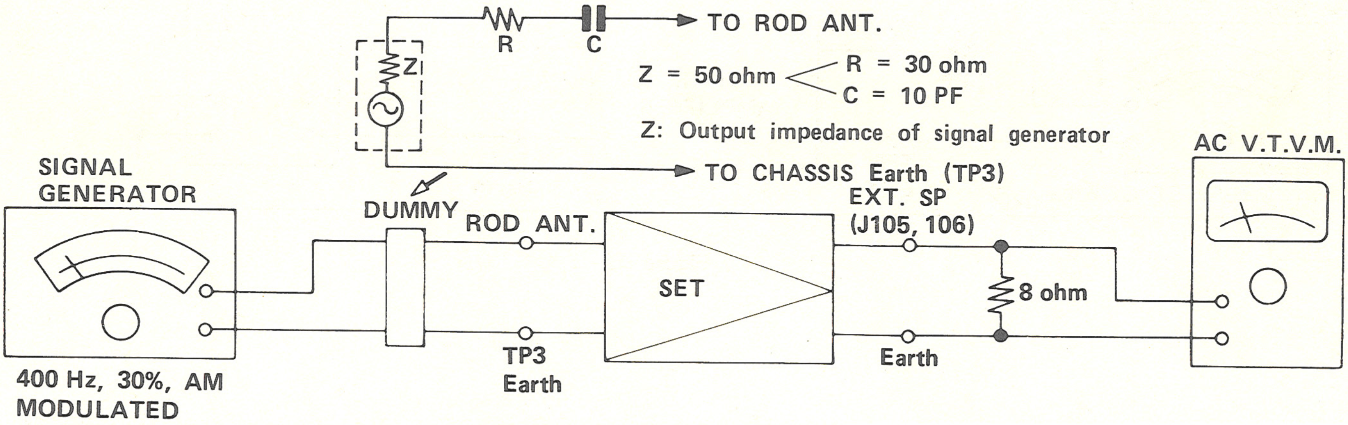

R
C
TO ROD ANT.
Z
Z = 50 ohm
R = 30 ohm
C = 10 PF
Z: Output impedance of signal generator
TO CHASSIS Earth (TP3)
DUMMY
SIGNAL
GENERATOR
400 Hz, 30%, AM
MODULATED
ROD ANT.
TP3
Earth
SET
EXT. SP
(J105, 106)
8 ohm
Earth
AC V.T.V.M.

Figure 11–3

Note A Check the alignment of the receiver antenna coil by bringing a piece of ferrite (such as a coil slug) near the antenna loop stick, then a piece of brass. If ferrite increases output, loop requires more inductance. If brass increases output, loop requires less inductance. Change loop inductance by sliding the bobbin toward the center of ferrite core to increase inductance, or away to decrease inductance.

THE INSTRUCTION OF FREQUENCY ADJUSTMENT
(GF-6060H ONLY)

In order to comply with FTZ rule: Nr. 358/1970, please fix the low end of dial frequency (87.5 MHz) and the high end of dial frequency (107.9 MHz) on FM band, by adjusting oscillation coils (L4) and oscillation trimmer (TC2), respectively, as illustrated in Figure 14.

FM IF/RF ALIGNMENT

STEP	BAND	TEST STAGE	SIGNAL GENERATOR		RECEIVER		ADJUSTMENT
			CONNECTION TO RECEIVER	INPUT SIGNAL FREQUENCY	DIAL SETTING	REMARKS	
1	FM	IF	Refer to Figure 12–1.	Exactly 10.7 MHz. (400 Hz, 30%, FM modulated)	High end of dial. (minimum capacity)	Adjust for best "S" curve	Adjust the FM IF transformers 1. (T1) 2. (T2)
2	FM	Band Coverage	Refer to Figures 12–2 and 30.	Exactly 87.1 MHz (400 Hz, 30%, FM modulated)	Low end of dial. (maximum capacity)	Adjust for maximum output.	Adjust the FM oscillation coils (L4).
3			Same as step 2.	Exactly 109 MHz. (400 Hz, 30%, FM modulated)	High end of dial. (minimum capacity)	Same as step 2.	Adjust the FM oscillation trimmer (TC2).
4	FM	Tracking	Same as step 2.	Exactly 88 MHz. (400 Hz, 30%, FM modulated)	88 MHz	Same as step 2.	Adjust the FM RF coils (L2, L3).
5			Same as step 2.	Exactly 108 MHz. (400 Hz, 30%, FM modulated)	108 MHz	Same as step 2.	Adjust the FM RF trimmer (TC1).
6	FM	Repeat steps 2, 3, 4 and 5 until no further improvement can be made.					

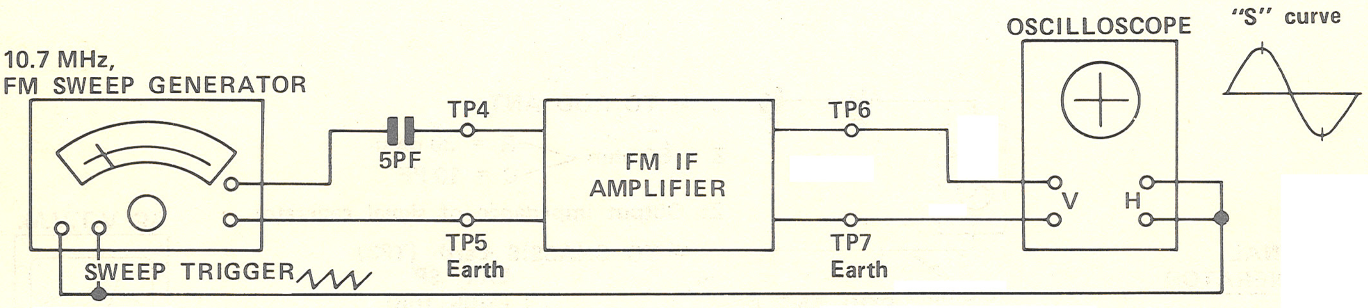

10.7 MHz,
FM SWEEP GENERATOR
SWEEP TRIGGER
5PF
TP4
TP5
Earth
FM IF AMPLIFIER
TP6
TP7
Earth
OSCILLOSCOPE
V
H
"S" curve

Figure 12–1

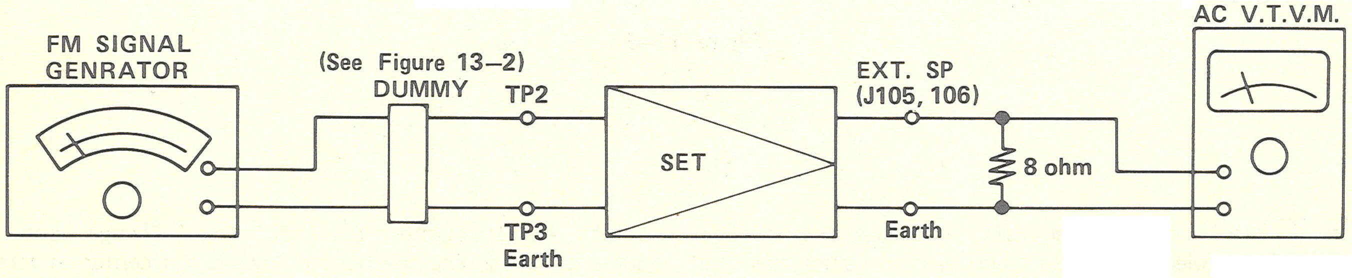

FM SIGNAL GENRATOR
(See Figure 13–2)
DUMMY
TP2
TP3
Earth
SET
EXT. SP
(J105, 106)
Earth
8 ohm
AC V.T.V.M.

Figure 12–2

FM STEREO ALIGNMENT

Set the Band Selector Switch (SW1) to "FM" position and FM Mode Selector Switch (SW2) to "stereo" position.

STEP	SIGNAL GENERATOR		RECEIVER		ADJUSTMENT
	CONNECTION TO RECEIVER	INPUT SIGNAL FREQUENCY	DIAL SETTING	REMARKS	
1	Refer to Figures 13–1 and 13–2.	Exactly 98 MHz (54 dB) un modulated.	98 MHz	Adjust for 19 ± 0.1 kHz.	Adjust the semi-variable resister (VR1)

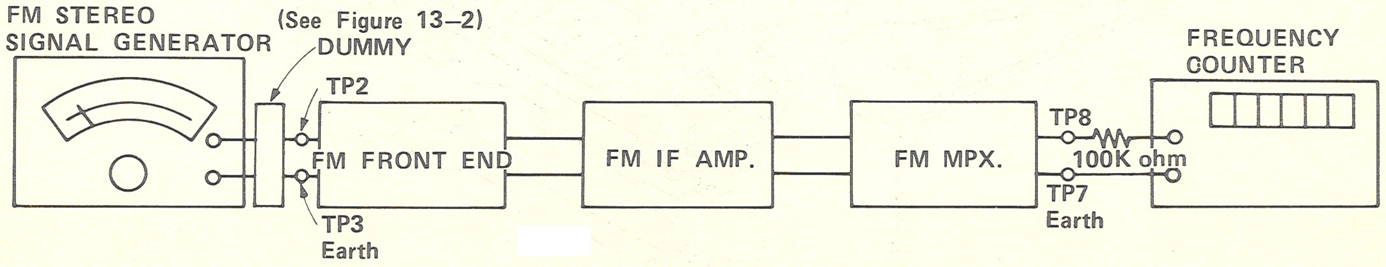
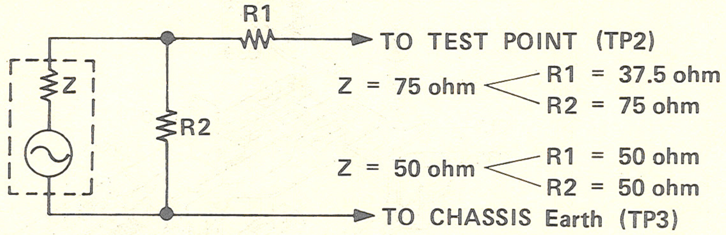

FM STEREO SIGNAL GENERATOR
(See Figure 13–2)
DUMMY
TP2
TP3
Earth
FM FRONT END
FM IF AMP.
FM MPX.
TP8
100K ohm
TP7
Earth
FREQUENCY COUNTER

Figure 13–1


R1
TO TEST POINT (TP2)
Z
R2
Z = 75 ohm
R1 = 37.5 ohm
R2 = 75 ohm
Z = 50 ohm
R1 = 50 ohm
R2 = 50 ohm
TO CHASSIS Earth (TP3)

Z: Output impedance of signal generator

Figure 13–2 FM DUMMY

ALIGNMENT POINTS

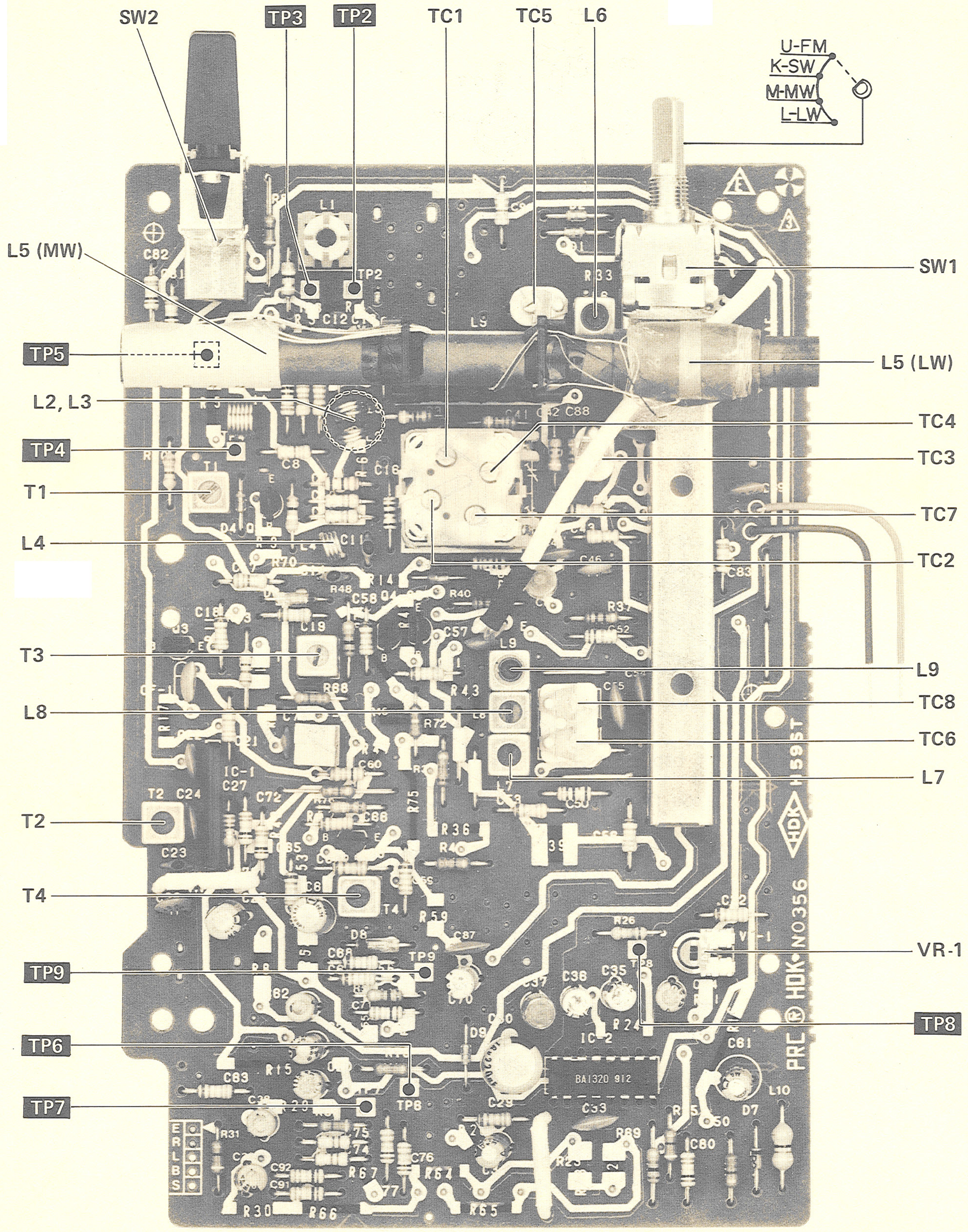

SW2
TP3
TP2
TC1
TC5
L6
U-FM
K-SW
M-MW
L-LW
L5 (MW)
SW1
TP5
L5 (LW)
L2, L3
TC4
TP4
TC3
T1
TC7
L4
TC2
T3
L9
L8
TC8
TC6
L7
T2
T4
VR-1
TP9
TP8
TP6
TP7

Figure 14

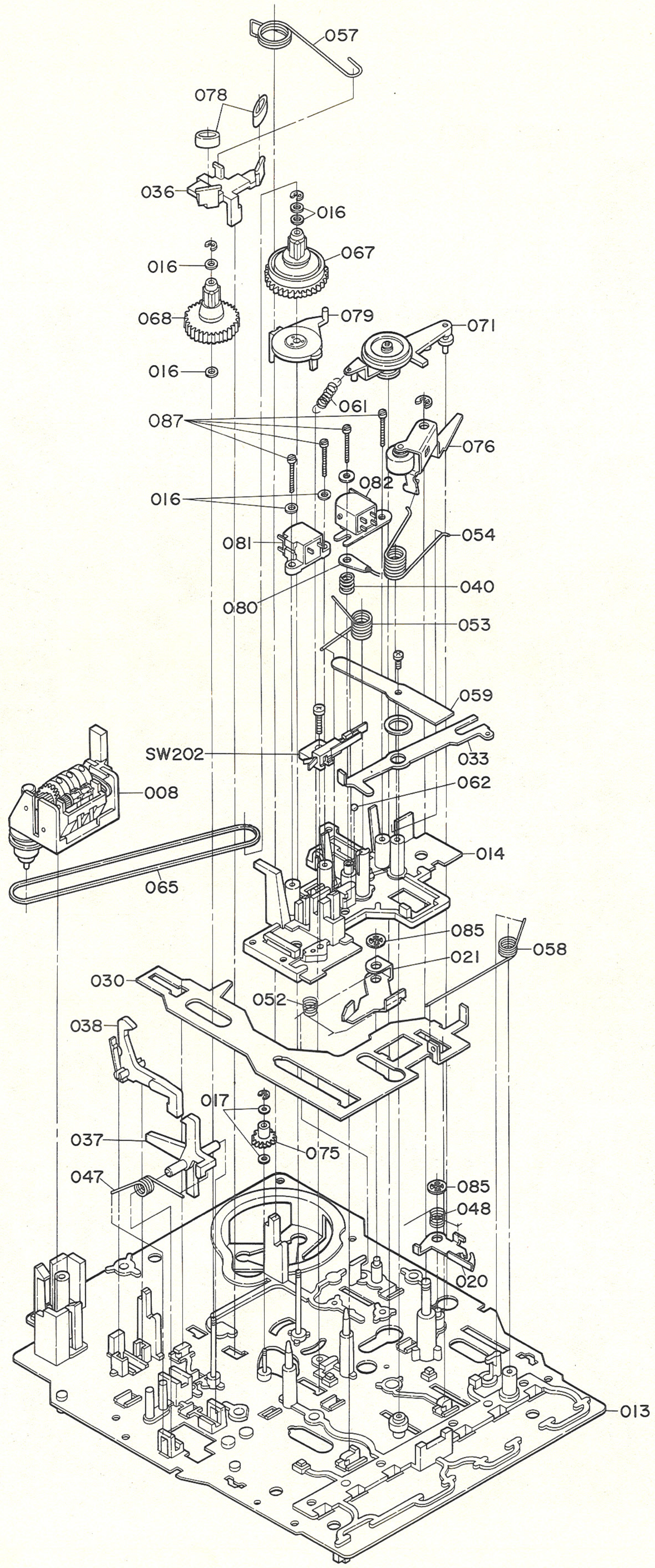

057
078
036
016
067
016
068
079
071
016
061
087
076
082
016
054
081
040
080
053
059
SW202
033
008
062
014
065
085
058
021
030
052
038
017
075
037
047
085
048
020
013

Figure 15 MECHANISM EXPLODED TOP VIEW

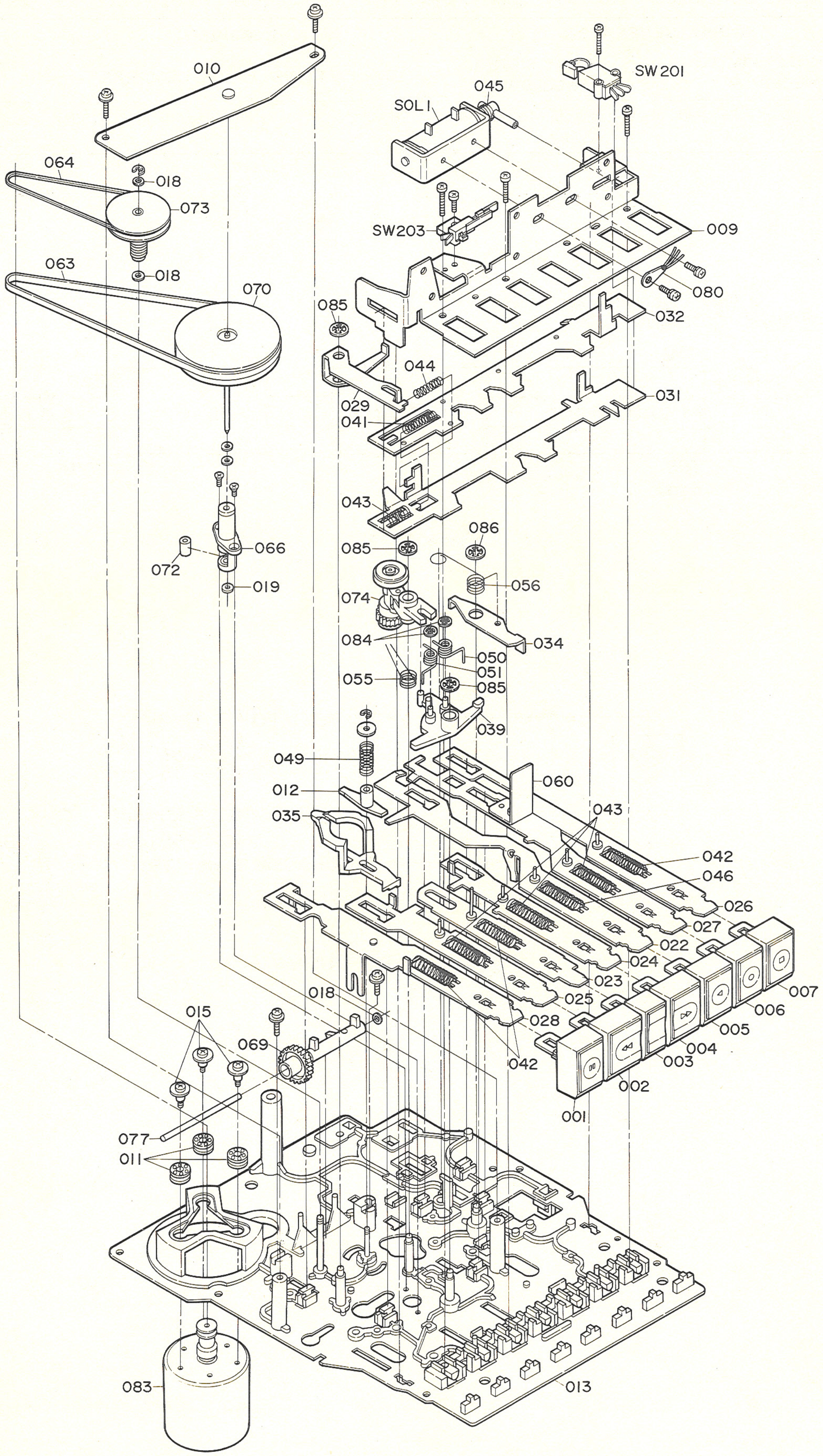

010
SW201
045
SOL1
064
018
073
SW203
009
063
018
070
085
080
032
044
029
041
031
043
086
085
066
072
019
056
074
034
084
050
051
055
085
039
049
060
012
035
043
042
046
026
027
022
024
023
018
025
007
028
015
069
006
005
004
003
042
002
001
077
011
083
013

Figure 16 MECHANISM EXPLODED BOTTOM VIEW

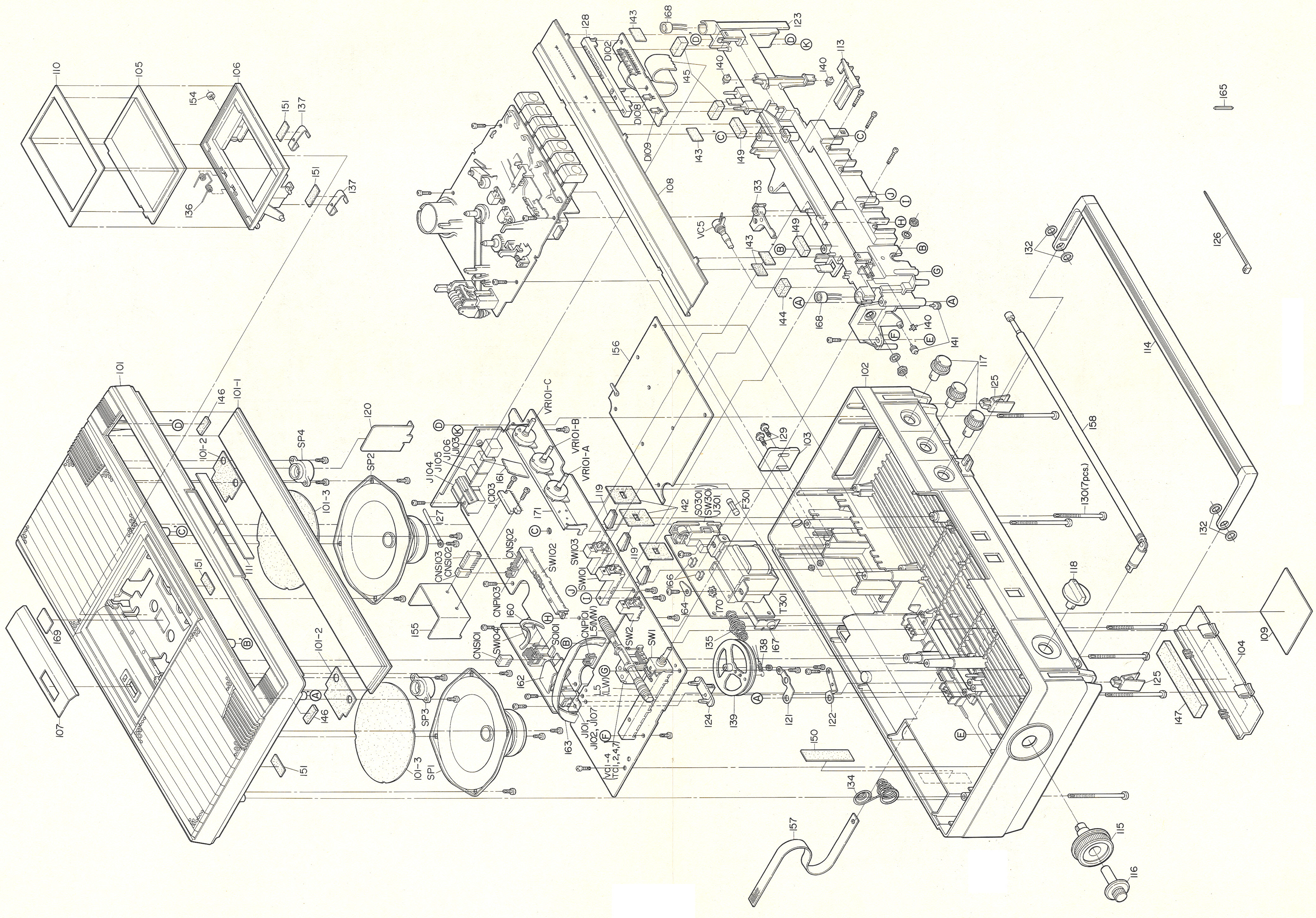

110
105
106
154
151
137
136
151
137
101
101-1
146
101-2
SP4
120
SP2
101-3
111
151
169
107
101-2
146
A
B
C
D
101-3
SP1
SP3
151
J104
J105
J106
J103
K
D
VR101-C
VR101-B
VR101-A
IC103
161
127
171
C
CNS103
CNS102
CNS102
SW102
SW103
SW101
J
I
155
CNP103
CNS101
SW104
160
H
S0101
B
162
163
CNP101
L5(MW)
L5(LW)
G
SW2
SW1
J101
J102, J107
F
VC1-4
(TC1,2,4,7)
119
119
142
S0301
SW301
J301
F301
166
164
170
T301
135
138
167
139
A
124
121
122
150
134
157
156
103
129
102
117
125
158
130(7pcs.)
132
132
118
104
109
147
125
115
116
E
114
126
165
128
143
168
D
123
D
K
113
140
140
D102
145
D108
D109
143
C
C
149
108
133
J
I
H
B
VC5
143
149
B
G
144
A
168
A
F
E
140
141

Figure 17 CABINET EXPLODED VIEW

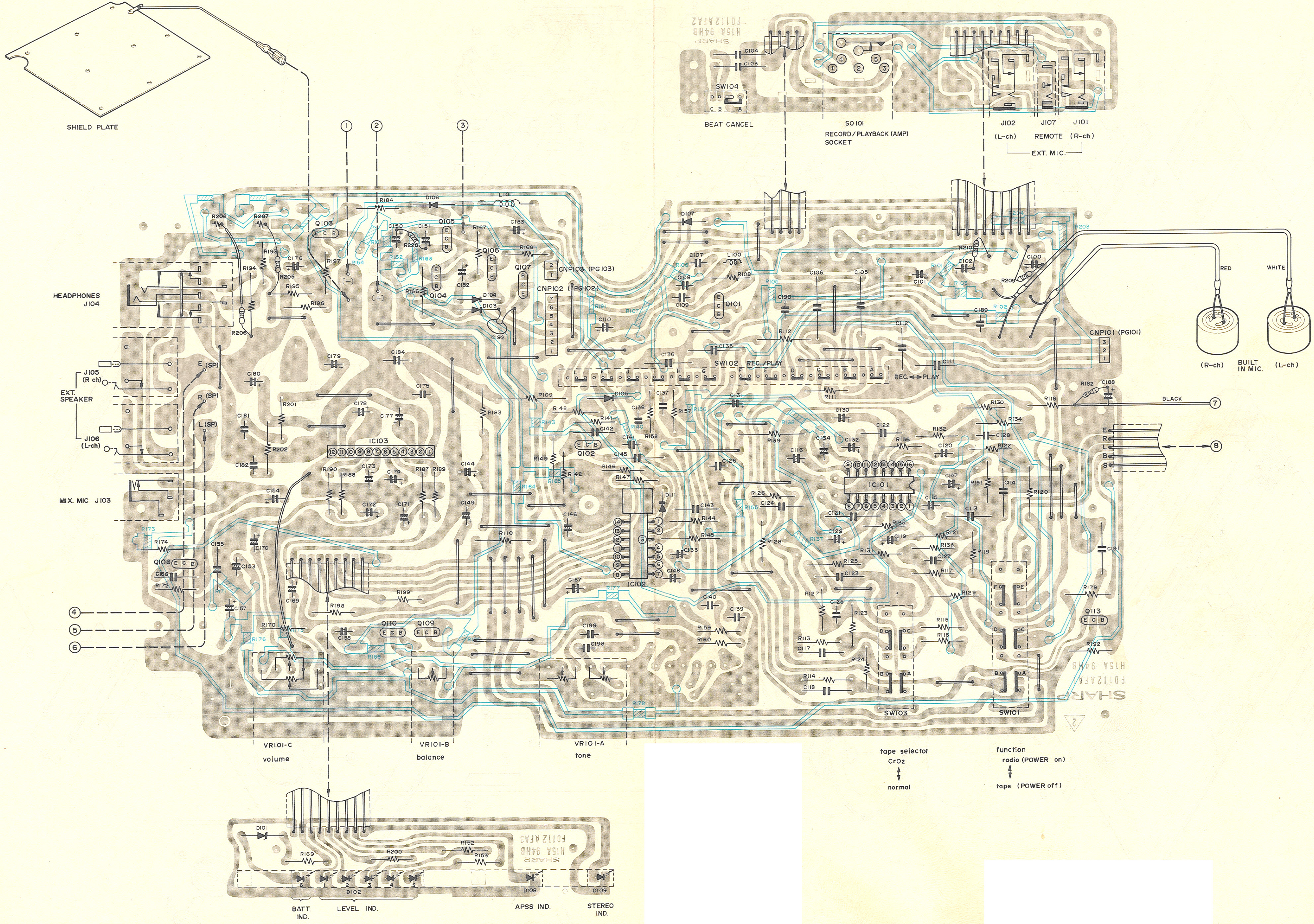
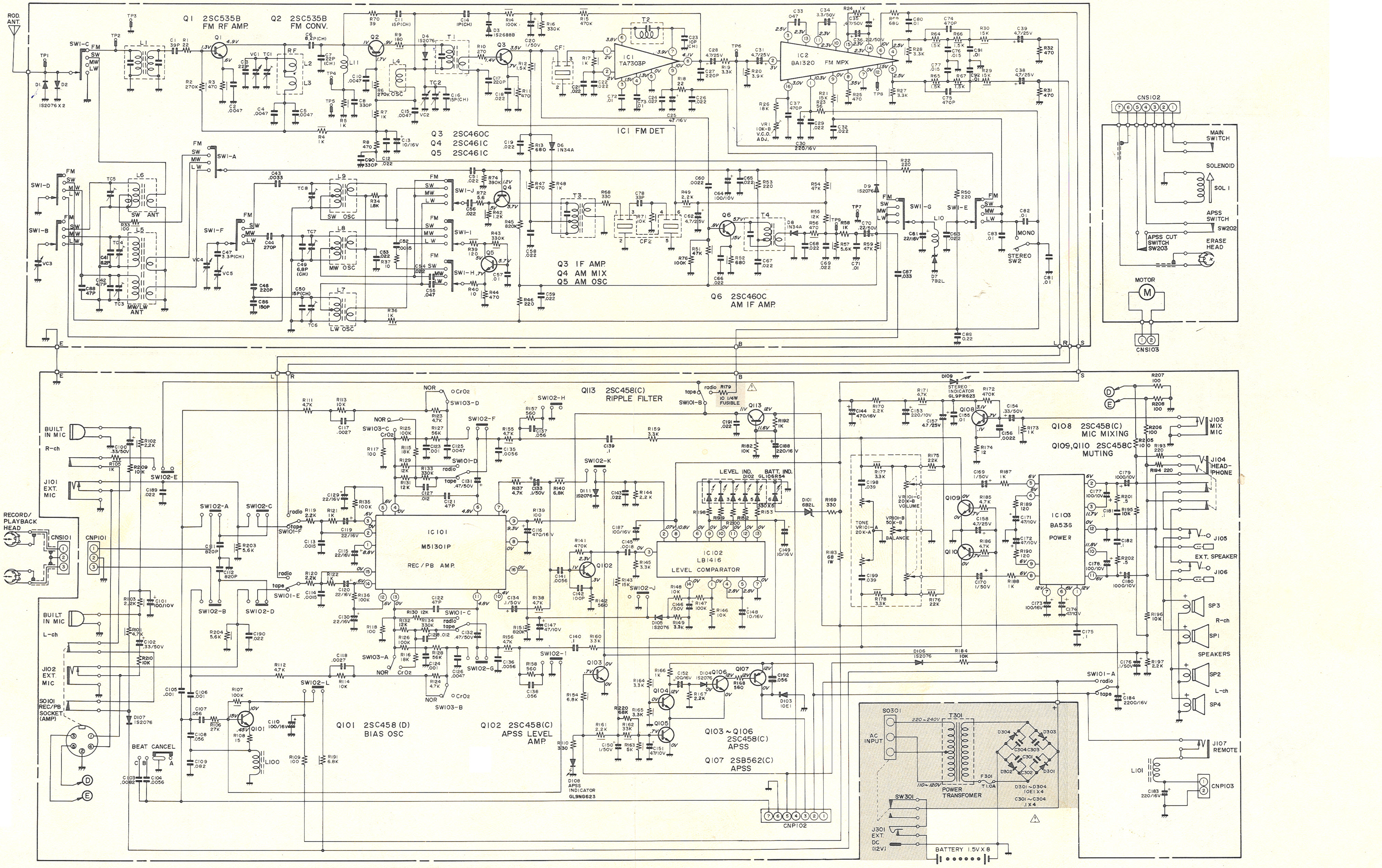

SHIELD PLATE
①
②
③
④
⑤
⑥
⑦
⑧
BEAT CANCEL
SW104
SO101
RECORD / PLAYBACK (AMP) SOCKET
J102 (L-ch)
J107 REMOTE
J101 (R-ch)
EXT. MIC.
HEADPHONES J104
EXT. SPEAKER
J105 (R ch)
J106 (L-ch)
MIX. MIC J103
CNP103 (PG103)
CNP102 (PG102)
CNP101 (PG101)
SW102 REC./PLAY
REC.↔PLAY
IC101
IC102
IC103
RED
WHITE
BLACK
(R-ch)
BUILT IN MIC.
(L-ch)
SW103
SW101
VR101-C volume
VR101-B balance
VR101-A tone
tape selector
CrO2
normal
function
radio (POWER on)
tape (POWER off)
D101
D102
D108
D109
BATT. IND.
LEVEL IND.
APSS IND.
STEREO IND.

Figure 19 WIRING SIDE OF AMP P.W. BOARD


ROD. ANT.
Q1 2SC535B FM RF AMP.
Q2 2SC535B FM CONV.
IC1 TA7303P
IC1 FM DET
IC2 BA1320 FM MPX
Q3 2SC460C
Q4 2SC461C
Q5 2SC461C
Q3 IF AMP
Q4 AM MIX
Q5 AM OSC
Q6 2SC460C AM IF AMP.
SW ANT
SW OSC
MW OSC
LW OSC
MW/LW ANT
CF1
CF2
STEREO SW2
MONO
CNS102
MAIN SWITCH
SOLENOID
SOL 1
APSS SWITCH SW202
APSS CUT SWITCH SW203
ERASE HEAD
MOTOR
CNS103
Q113 2SC458(C) RIPPLE FILTER
BUILT IN MIC R-ch
J101 EXT. MIC
RECORD/PLAYBACK HEAD
CNS101
CNP101
BUILT IN MIC L-ch
J102 EXT. MIC
S0101 REC/PB SOCKET (AMP)
IC101 M51301P REC/PB AMP.
IC102 LB1416 LEVEL COMPARATOR
LEVEL IND. D102 BATT. IND. GL106R54
Q101 2SC458(D) BIAS OSC
Q102 2SC458(C) APSS LEVEL AMP
Q103 ~ Q106 2SC458(C) APSS
Q107 2SB562(C) APSS
D108 APSS INDICATOR GL9NG623
BEAT CANCEL
L100
CNP102
D109 STEREO INDICATOR GL9PR623
Q108 2SC458(C) MIC MIXING
Q109,Q110 2SC458C MUTING
IC103 BA536 POWER
TONE VR101-A 20K-A
VR101-C 20K-B VOLUME
VR101-B 50K-B BALANCE
J103 MIX MIC
J104 HEAD-PHONE
J105
EXT. SPEAKER
J106
SP3 R-ch SP1
SPEAKERS
SP2 L-ch SP4
S0301 AC INPUT
T301 POWER TRANSFORMER
220~240V
110~120V
F301 T1.0A
D301~D304 10E1 X 4
C301~C304 .1 X 4
SW301
J301 EXT. DC (12V)
BATTERY 1.5V X 8
J107 REMOTE
L101
CNP103

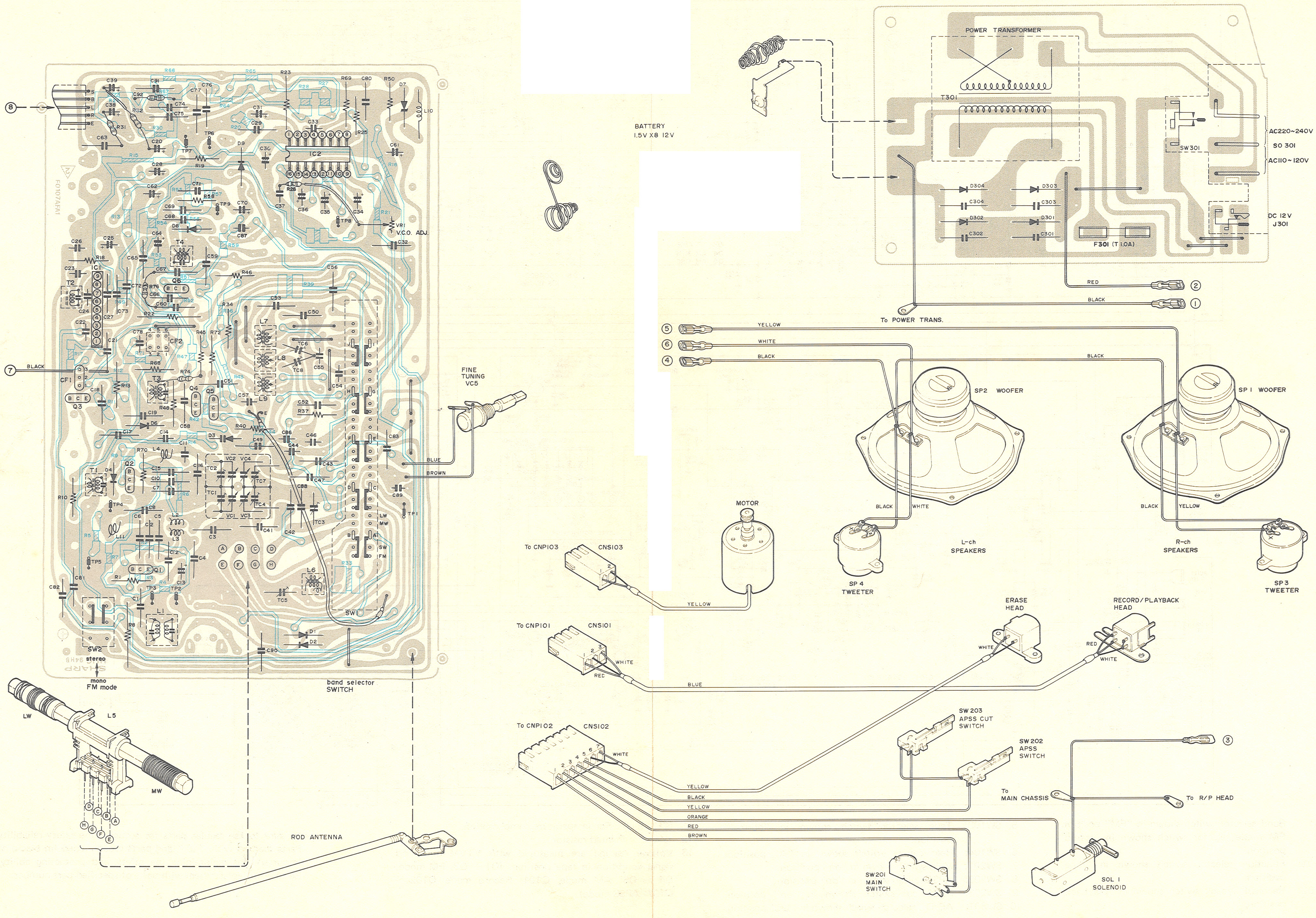
NOTE;

1. SW1: Band selector switch shown in "FM" position.
2. SW2: FM mode selector switch shown in "stereo" position.
3. SW101: Function selector switch shown in "tape" position.
4. SW102: Record/Playback switch shown in "playback" position.
5. SW103: Tape selector switch shown in "normal" position.
6. SW104: Beat cancel switch shown in "A" position.
7. SW201: Main switch shown in "on" position.
8. SW202: APSS switch shown in "on" position.
9. SW203: APSS cut switch shown in "on" position.
10. SW301: AC/DC selector switch shown in "DC" position.
11. (CH), (UJ): For temperature compensation.
12. -W-: Printed resistor
13. Voltage reading are measured with VTVM under no signal condition in tape position. (Q1 ~ Q3: FM mode, Q4 ~ Q6: AM mode, Q101: Record mode, Q102 ~ Q107: APSS mode)

* Be sure to use regular parts for securing the safety reliability of the set. Parts marked with "⚠" and parts crosshatched (in black) are especially important for maintaining the safety and protecting ability to the set. Be sure tot replace them with parts of specified part number.

Specifications or wiring diagrams of this model are subject to change for the improvement without prior notice.

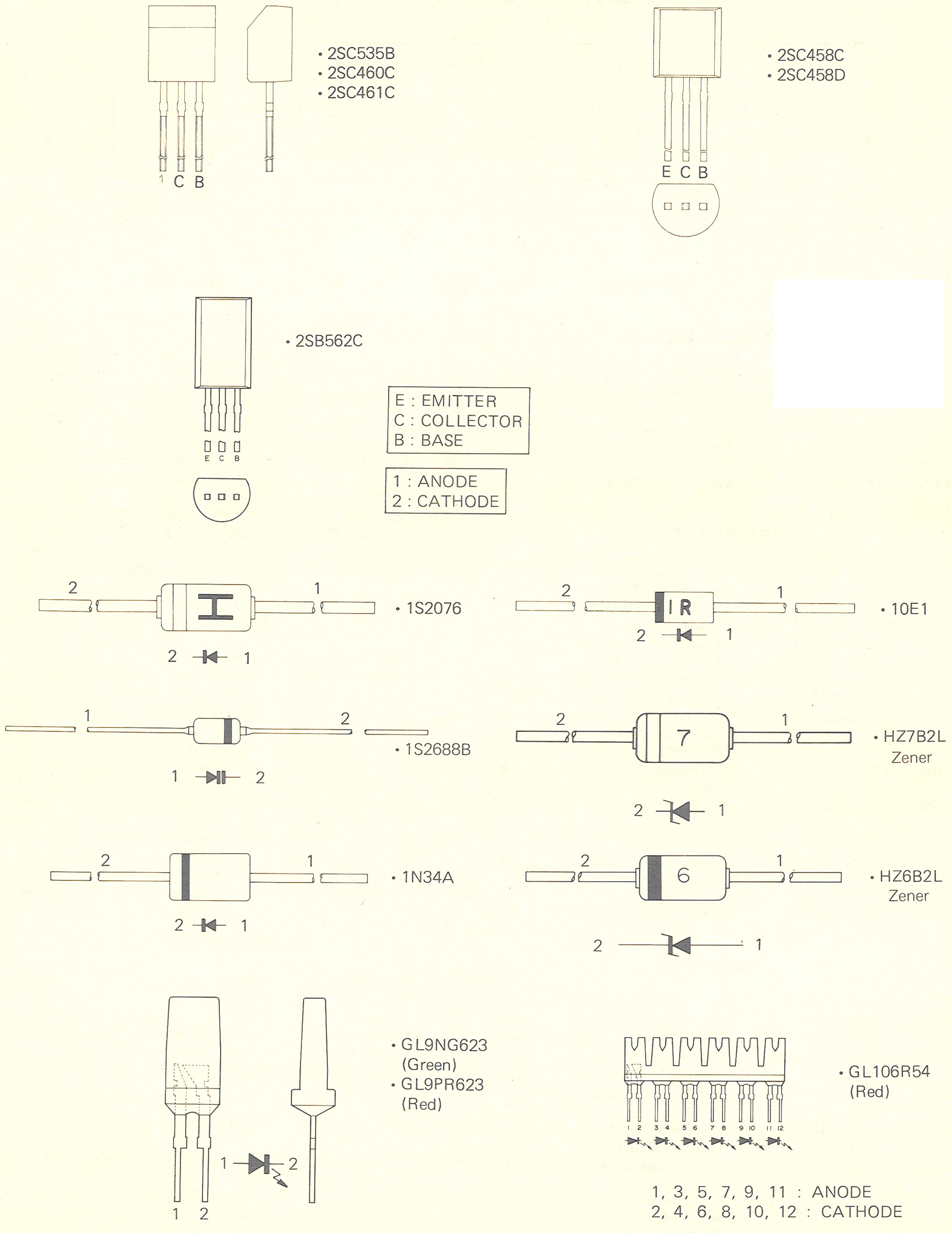
Figure 21 SCHEMATIC DIAGRAM



⑧
⑦
BLACK
CF1
Q3
IC1
IC2
T1
T2
T3
T4
VR1
V.C.O. ADJ.
L10
D7
D9
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
VC1
VC2
VC3
VC4
TC1
TC2
TC3
TC4
TC6
TC7
TC8
L7
L8
L9
L6
L1
L2
L3
L4
D1
D2
D3
D4
D6
D8
Q1
Q2
Q4
Q5
Q6
CF2
SW1
SW2
stereo
mono
FM mode
FINE
TUNING
VC5
BLUE
BROWN
LW
MW
SW
FM
band selector
SWITCH
LW
L5
MW
A
B
C
D
E
F
G
H
ROD ANTENNA
BATTERY
1.5V X8 12V
POWER TRANSFORMER
T301
SW301
AC220~240V
SO 301
AC110~120V
D301
D302
D303
D304
C301
C302
C303
C304
F301 (T 1.0A)
DC 12V
J301
RED
BLACK
②
①
To POWER TRANS.
⑤
⑥
④
YELLOW
WHITE
BLACK
BLACK
SP2 WOOFER
SP1 WOOFER
BLACK
WHITE
BLACK
YELLOW
L-ch
SPEAKERS
R-ch
SPEAKERS
SP 4
TWEETER
SP 3
TWEETER
MOTOR
To CNP103
CNS103
YELLOW
ERASE
HEAD
RECORD/PLAYBACK
HEAD
WHITE
RED
WHITE
To CNP101
CNS101
WHITE
RED
BLUE
SW 203
APSS CUT
SWITCH
SW 202
APSS
SWITCH
③
To CNP102
CNS102
WHITE
YELLOW
BLACK
YELLOW
ORANGE
RED
BROWN
To
MAIN CHASSIS
To R/P HEAD
SW201
MAIN
SWITCH
SOL 1
SOLENOID

Figure 23 WIRING SIDE OF TUNER P.W. BOARD

TYPES OF TRANSISTOR, DIODE AND LED


• 2SC535B
• 2SC460C
• 2SC461C
1 C B
• 2SC458C
• 2SC458D
E C B
• 2SB562C
E C B
2 1 • 1S2076
2 1
2 1 • 10E1
2 1
1 2 • 1S2688B
1 2
2 7 1 • HZ7B2L Zener
2 1
2 1 • 1N34A
2 1
2 6 1 • HZ6B2L Zener
2 1
• GL9NG623 (Green)
• GL9PR623 (Red)
1 2
1 2
• GL106R54 (Red)
1 2 3 4 5 6 7 8 9 10 11 12

E : EMITTER
C : COLLECTOR
B : BASE

1 : ANODE
2 : CATHODE

1, 3, 5, 7, 9, 11 : ANODE
2, 4, 6, 8, 10, 12 : CATHODE

Figure 25

EQUIVALENT OF INTEGRATED CIRCUIT

■ **IC1 : RX-IX1083AFZZ (TA7303P)**

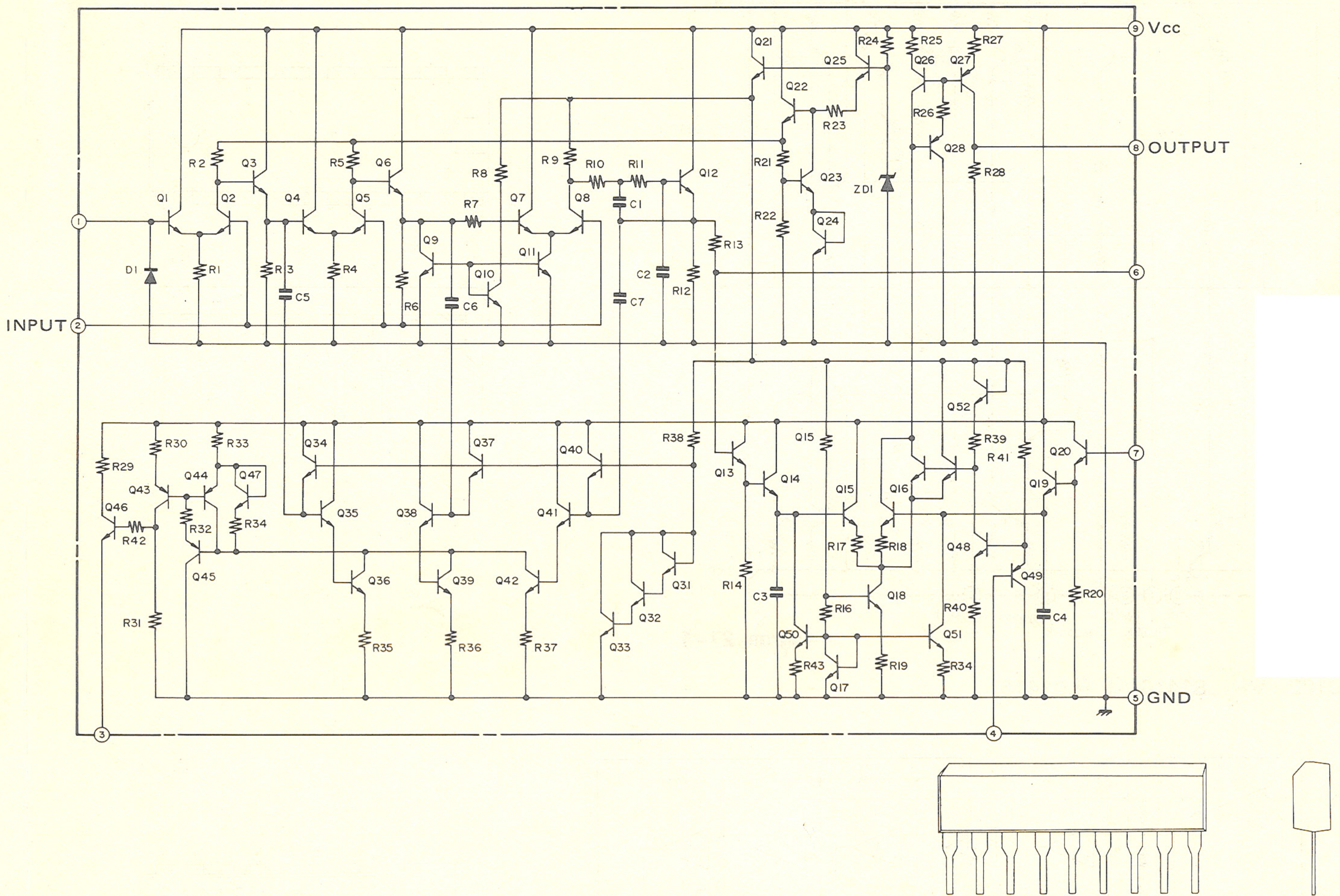

Vcc
OUTPUT
INPUT
GND
1
2
3
4
5
6
7
8
9
D1
ZD1
1 2 3 4 5 6 7 8 9

Figure 26–1

■ **IC2 : RH-IX1082AFZZ (BA1320)**

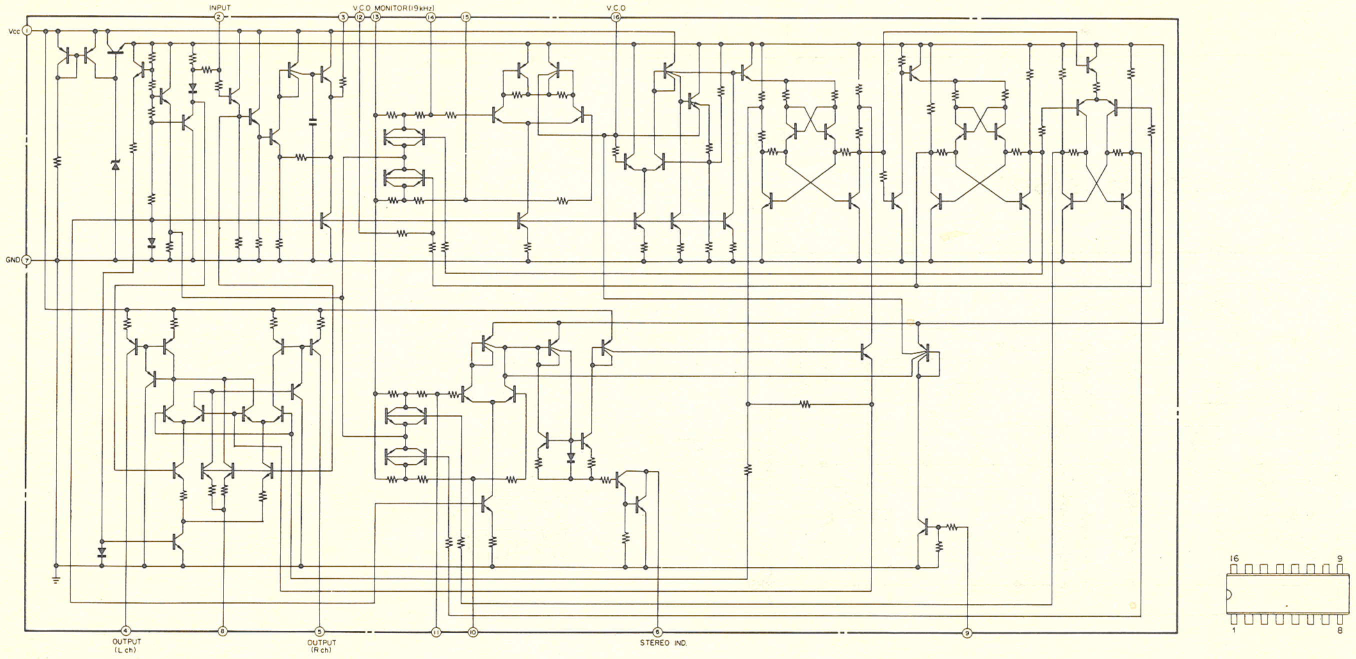
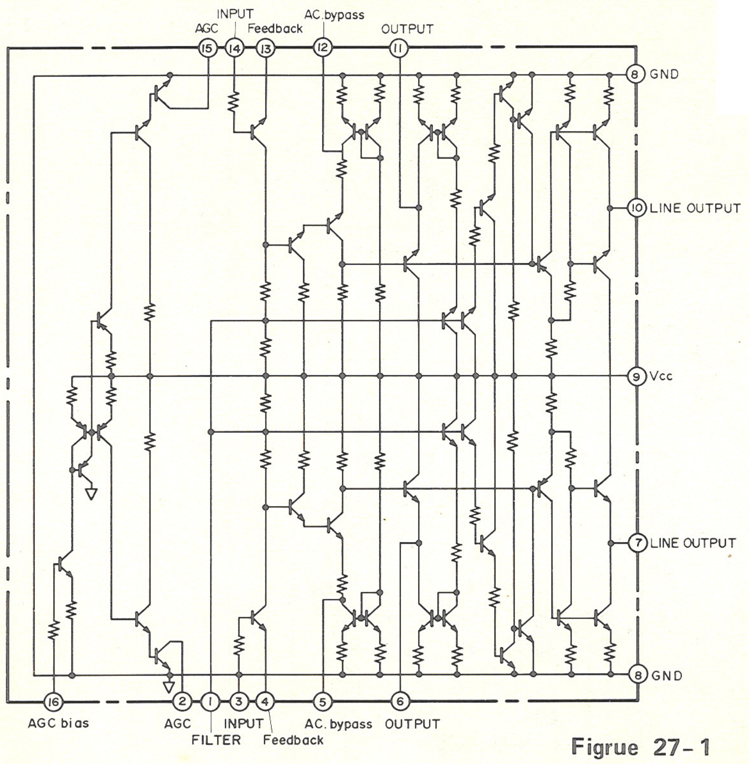
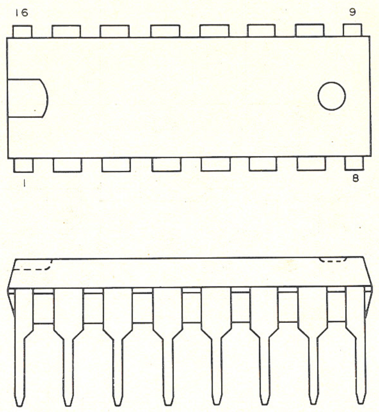

INPUT
V.C.O. MONITOR(19kHz)
V.C.O
Vcc
GND
OUTPUT (L ch)
OUTPUT (R ch)
STEREO IND.
16
9
1
8

Figure 26–2

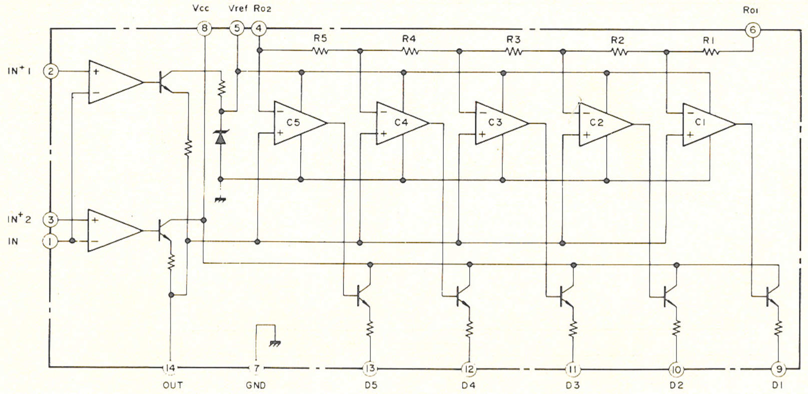
■ IC101 : VHIM51301P/-1 (M51301P)





Figrue 27-1

■ IC102 : VHILB1416//-1 (LB1416)



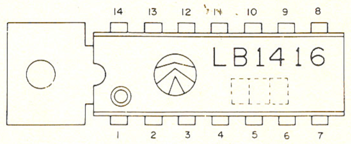
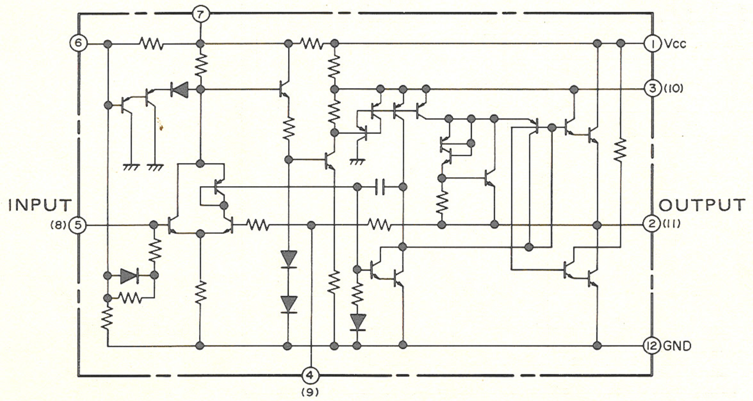


Figure 27–2

■ IC103 : VHIBA536///-1 (BA536)



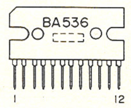


Figure 27–3

REPLACEMENT PARTS LIST

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

NOTES:
Be sure to use regular parts for securing the safety and reliability of the set. Parts marked with " ⚠ " and parts cross-hatched (in black) are especially important for maintaining the safety and protecting ability of the set.
Be sure to replace them with parts of specified part number.

INTEGRATED CIRCUITS

REF. NO.	PART NO.	DESCRIPTION	CODE
IC1	RH-IX1083AFZZ	FM Detector (TA7303P)	AK
IC2	RH-IX1082AFZZ	FM Multiplex Demodulator (BA1320)	AH
IC101	VHIM51301P/-1	Record/Playback Amp. (M51301P)	AK
IC102	VHILB1416//-1	Level Comparator (LB1416)	AK
IC103	VHIBA536///-1	Power Amp. (BA536)	AP

TRANSISTORS

REF. NO.	PART NO.	DESCRIPTION	CODE
Q1	VS2SC535-B/-1	FM RF Amp. (2SC535B)	AC
Q2	VS2SC535-B/-1	FM Convertor (2SC535B)	AC
Q3	VS2SC460-C/-1	AM/FM IF Amp. (2SC460C)	AC
Q4	VS2SC461-C/-1	AM Mixer (2SC461C)	AC
Q5	VS2SC461-C/-1	AM Oscillator (2SC461C)	AC
Q6	VS2SC460-C/-1	AM IF Amp. (2SC460C)	AC
Q101	VS2SC458-D/-1	Bias Oscillator (2SC458D)	AB
Q102	VS2SC458-C/-1	APSS Level Amp. (2SC458C)	AB
Q103	VS2SC458-C/-1	APSS Muting (2SC458C)	AB
Q104	VS2SC458-C/-1	APSS Plunger Control (2SC458C)	AB
Q105	VS2SC458-C/-1	APSS Plunger Control (2SC458C)	AB
Q106	VS2SC458-C/-1	APSS Plunger Control (2SC458C)	AB
Q107	VS2SB562-C/-1	APSS Plunger Drive (2SB562C)	AD
Q108	VS2SC458-C/-1	Mic Mixing Amp. (2SC458C)	AB
Q109	VS2SC458-C/-1	Muting (2SC458C)	AB
Q110	VS2SC458-C/-1	Muting (2SC458C)	AB
Q113	VS2SC458-C/-1	Ripple Filter (2SC458C)	AB

DIODES

REF. NO.	PART NO.	DESCRIPTION	CODE
D1	VHD1S2076//-1	Static Protector (1S2076)	AB
D2	VHD1S2076//-1	Static Protector (1S2076)	AB
D3	VHC1S2688-B1F	Varistor, FM AFC (1S2688B)	AC
D4	VHD1S2076//-1	FM Overload (1S2076)	AB
D6	VHD1N34A///-1	AM Overload (1N34A)	AB
D7	VHEHZ7B2L//-1	Zener, Voltage Stabilizer (HZ7B2L)	AB
D8	VHD1N34A///-1	AM Detector (1N34A)	AB
D9	VHD1S2076//-1	Switching (1S2076)	AB
D101	VHEHZ6B2L//-1	Zener, Voltage Stabilizer (HZ6B2L)	AC
D102 (1 ~ 6)	RH-PX1017AFZZ	LED, Power On/Battery Level Indicator/Level Indicator (GL106R54)	AL
D103	VHD10E1////-1	Surge Absorber (10E1)	AC
D104	VHD1S2076//-1	Static Protector (1S2076)	AB
D105	VHD1S2076//-1	Buffer (1S2076)	AB
D106, D107	VHD1S2076//-1	Reverse Current Protector (1S2076)	AB
D108	RH-PX1019AFZZ	LED, APSS Indicator (GL9NG623)	AD
D109	RH-PX1018AFZZ	LED, FM Stereo Indicator (GL9PR623)	AC
D111	VHD1S2076//-1	Switching (1S2076)	AB
⚠D301	VHD10E1////-1	Power Rectifier (10E1)	AC
⚠D302	VHD10E1////-1	Power Rectifier (10E1)	AC
⚠D303	VHD10E1////-1	Power Rectifier (10E1)	AC
⚠D304	VHD10E1////-1	Power Rectifier (10E1)	AC

COILS

REF. NO.	PART NO.	DESCRIPTION	CODE
L1	RCILA0455AFZZ	Band Pass Filter	AC
L2	RCILR0340AFZZ	FM RF	AA
L3	RCILR0340AFZZ	FM RF	AA
L4	RCILB0463AFZZ	FM Local Oscillator	AA
L5	RCILA0457AFZZ	Bar Antenna, MW/LW	AK
L6	RCILA0462AFZZ	SW Antenna	AD
L7	RCILB0353AFZZ	LW Oscillator (GF-6060H)	AC
	RCILB0456AFZZ	LW Oscillator (GF-6060E)	AD
L8	RCILB0389AFZZ	MW Oscillator	AD
L9	RCILB0309AFZZ	SW Oscillator	AD
L10	VP-CH470K0000	Noise Suppressor, 47μH	AB
L11	RCILC0072AFZZ	Emitter Choke	AA
L100	RCILF0072AFZZ	Bias Oscillator	AC
L101	VP-CH470K0000	Noise Suppressor, 47μH	AB

TRANSFORMERS

REF. NO.	PART NO.	DESCRIPTION	CODE
T1	RCILI0157AFZZ	FM IF	AC
T2	RCILI0208AFZZ	FM IF	AC
T3	RCILI0256AFZZ	AM IF	AC
T4	RCILI0170AFZZ	AM IF, 455kHz (GF-6060H)	AC
	RCILI0253AFZZ	AM IF, 468kHz (GF-6060E)	AC
⚠T301	RTRNP0654AFZZ	Power	AR

FILTERS

REF. NO.	PART NO.	DESCRIPTION	CODE
CF1	RFILF0071AFZZ	Ceramic, 10.7MHz, FM IF	AD
CF2	RFILA0074AFZZ	Ceramic, 455kHz, AM IF (GF-6060H)	AE
	RFILA0077AFZZ	Ceramic, 468kHz, AM IF (GF-6060E)	AE

PARTS LIST

CONTROLS

REF. NO.	PART NO.	DESCRIPTION	CODE
VC1, VC2, VC3, VC4, TC1, TC2, TC4, TC7	RVC-R0071AFZZ	Variable Capacitor, Tuning with Trimmer TC1: FM RF Trimmer TC2: FM Oscillator Trimmer TC4: MW Antenna Trimmer TC7: MW Oscillator Trimmer	AN
VC5	RVC-Z0051AFZZ	Fine Tuning	AG
TC3	RTO-H1007AFZZ	LW Antenna Trimmer	AC
TC5	RTO-H1007AFZZ	SW Antenna Trimmer	AC
TC6, TC8	RTO-H2050AFZZ	Trimmer; TC6: LW Osc. TC8: SW Osc.	AD
VR1	RVR-M0216AFZZ	VCO Adjust, 10K ohm (B)	AB
VR101 (A～C)	RVR-Z0078AFZZ	Variable Resistor with Bracket; VR101-A: 20K ohm (A), Tone VR101-B: 50K ohm (B), Balance VR101-C: 20K ohm (B), Volume	AL

ELECTROLYTIC CAPACITORS

REF. NO.	PART NO.	DESCRIPTION	CODE
C13	RC-EZA106AF1C	10MFD, 16V, +50 −10%	AB
C20	RC-EZA105AF1H	1MFD, 50V, +50 −10%	AB
C25	RC-EZA476AF1C	47MFD, 16V, ±20%	AB
C28	RC-EZA475AF1E	4.7MFD, 25V, ±20%	AB
C30	RC-EZV227AF1C	220MFD, 16V, ±20%	AB
C31	RC-EZA475AF1E	4.7MFD, 25V, ±20%	AB
C34	RC-EZA335AF1H	3.3MFD, 50V, +50 −10%	AB
C35	VCEALA1HW474M	.47MFD, 50V, ±20%	AB
C36	VCEALA1HW224M	.22MFD, 50V, ±20%	AB
C38	RC-EZA475AF1E	4.7MFD, 25V, ±20%	AB
C39	RC-EZA475AF1E	4.7MFD, 25V, ±20%	AB
C61	RC-EZA226AF1C	22MFD, 16V, +50 −10%	AB
C62	RC-EZA475AF1E	4.7MFD, 25V, ±20%	AB
C64	RC-EZA107AF1A	100MFD, 10V, ±20%	AB
C70	VCEALA1HW224M	.22MFD, 50V, ±20%	AB
C100	VCEALA1HW334M	.33MFD, 50V, ±20%	AB
C101	RC-EZA107AF1A	100MFD, 10V, ±20%	AB
C102	VCEALA1HW334M	.33MFD, 50V, ±20%	AB
C110	RC-EZA107AF1C	100MFD, 16V, ±20%	AB
C115	RC-EZA226AF1C	22MFD, 16V, +50 −10%	AB
C116	RC-EZV477AF1C	470MFD, 16V, ±20%	AC
C119	RC-EZA226AF1C	22MFD, 16V, +50 −10%	AB
C120	RC-EZA226AF1C	22MFD, 16V, +50 −10%	AB
C129	RC-EZA226AF1C	22MFD, 16V, +50 −10%	AB
C130	RC-EZA226AF1C	22MFD, 16V, +50 −10%	AB
C131	VCEALA1HW474M	.47MFD, 50V, ±20%	AB
C132	VCEALA1HW474M	.47MFD, 50V, ±20%	AB
C133	VCEALA1HW104M	.1MFD, 50V, ±20%	AB
C134	VCEALA1HW104M	.1MFD, 50V, ±20%	AB
C144	RC-EZV477AF1C	470MFD, 16V, ±20%	AC
C146	VCEALA1HW225M	2.2MFD, 50V, ±20%	AB
C147	RC-EZA476AF1A	47MFD, 10V, ±20%	AB
C148	RC-EZA106AF1C	10MFD, 16V, +50 −10%	AB
C149	VCEALA1CW106M	10MFD, 16V, ±20%	AB
C150	RC-EZA105AF1H	1MFD, 50V, +50 −10%	AB
C151	RC-EZA476AF1A	47MFD, 10V, ±20%	AB
C152	RC-EZA107AF1C	100MFD, 16V, ±20%	AB
C153	RC-EZA227AF1A	220MFD, 10V, ±20%	AB
C154	VCEALA1HW334M	.33MFD, 50V, ±20%	AB
C157	RC-EZA475AF1E	4.7MFD, 25V, ±20%	AB
C158	RC-EZA475AF1E	4.7MFD, 25V, ±20%	AB
C169	RC-EZA105AF1H	1MFD, 50V, +50 −10%	AB
C170	RC-EZA105AF1H	1MFD, 50V, +50 −10%	AB
C171	RC-EZA476AF1A	47MFD, 10V, ±20%	AB
C172	RC-EZA476AF1A	47MFD, 10V, ±20%	AB
C173	RC-EZA107AF1C	100MFD, 16V, ±20%	AB
C174	RC-EZA476AF1A	47MFD, 10V, ±20%	AB
C176	VCEALA1HW104M	.1MFD, 50V, ±20%	AB
C177	RC-EZA107AF1A	100MFD, 10V, ±20%	AB
C178	RC-EZA107AF1A	100MFD, 10V, ±20%	AB
C179	RC-EZV108AF1A	1000MFD, 10V, ±20%	AD
C180	RC-EZV108AF1A	1000MFD, 10V, ±20%	AD
C183	RC-EZV227AF1C	220MFD, 16V, ±20%	AB
C184	RC-EZW228AF1C	2200MFD, 16V, ±20%	AE
C187	RC-EZA107AF1C	100MFD, 16V, ±20%	AB
C188	RC-EZV227AF1C	220MFD, 16V, ±20%	AB

CAPACITORS

REF. NO.	PART NO.	DESCRIPTION	CODE
C1	VCCSAT1HL390J	39PF, 50V, ±5%, Ceramic	
C2	VCTYAT1HX472N	.0047MFD, 50V, ±30%, Semiconductor	
C3	VCCSAT1HL220J	22PF, 50V, ±5%, Ceramic	
C4	VCTYAT1HX472N	.0047MFD, 50V, ±30%, Semiconductor	
C5	VCTYAT1HX472N	.0047MFD, 50V, ±30%, Semiconductor	
C6	VCCCAT1HH8R2D	8.2PF, 50V, ±0.5PF, Ceramic, CH (Black)	
C7	VCCCAT1HH220J	22PF, 50V, ±5%, Ceramic, CH (Black)	
C8	VCKYAT1HB331K	330PF, 50V, ±10%, Ceramic	
C10	VCTYAT1HV472K	.0047MFD, 50V, ±10%, Semiconductor	
C11	VCCCPA1HH150J	15PF, 50V, ±5%, Ceramic, CH (Black)	
C12	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C14	VCCCPA1HH1R0C	1PF, 50V, ±0.25PF, Ceramic, CH (Black)	
C15	VCTYAT1HV472K	.0047MFD, 50V, ±10%, Semiconductor	
C16	VCCCAT1HH150J	15PF, 50V, ±5%, Ceramic, CH (Black)	
C17	VCKYAT1HB221K	220PF, 50V, ±10%, Ceramic	
C18	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C19	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C21	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C22	VCTYPA1EX223M	.022MFD, 25V, ±20%, Semiconductor	
C23	VCCCPA1HH100D	10PF, 50V, ±0.5PF, Ceramic, CH (Black)	
C24	VCTYPA1EX223M	.022MFD, 25V, ±20%, Semiconductor	
C26	VCTYPA1EX223M	.022MFD, 25V, ±20%, Semiconductor	
C27	VCKYAT1HB221K	220PF, 50V, ±10%, Ceramic	

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
C29	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C32	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C33	VCTYPA1EX473M	.047MFD, 25V, ±20%, Semiconductor	
C37	VCQSMA1HL471J	470PF, 50V, ±5%, Styrol	AB
C41	VCCSAT1HL8R2C	8.2PF, 50V, ±0.25PF, Ceramic	
C42	VCCSAT1HL4R7C	4.7PF, 50V, ±0.25PF, Ceramic	
C43	VCTYAT1HV332K	.0033MFD, 50V, ±10%, Semiconductor	
C44	VCCSPA1HL271J	270PF, 50V, ±10%, Ceramic	
C46	VCCSPA1HL221J	220PF, 50V, ±5%, Ceramic	
C47	VCCCAT1HH3R3C	3.3PF, 50V, ±0.25PF, Ceramic, CH (Black)	
C49	VCCCAT1HH6R8D	6.8PF, 50V, ±0.5PF, Ceramic, CH (Black)	
C50	VCCCAT1HH150J	15PF, 50V, ±5%, Ceramic, CH (Black)	
C51	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C52	VCTYAT1HV152K	.0015MFD, 50V, ±10%, Semiconductor	
C53	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C54	VCTYPA1EX223M	.022MFD, 25V, ±20%, Semiconductor	
C55	VCTYPV1EX473M	.047MFD, 25V, ±20%, Semiconductor	
C56	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C57	VCTYPA1EX103M	.01MFD, 25V, ±20%, Semiconductor	
C58	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C59	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C60	VCTYAT1HX222M	.0022MFD, 50V, ±20%, Semiconductor	
C63	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C65	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C66	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C67	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C68	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C69	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C71	VCTYAT1EX103N	.01MFD, 25V, ±30%, Semiconductor	
C72	VCTYAT1EX103N	.01MFD, 25V, ±30%, Semiconductor	
C73	VCTYAT1EX103N	.01MFD, 25V, ±30%, Semiconductor	
C74	VCKYAT1HB471K	470PF, 50V, ±10%, Ceramic	
C75	VCKYAT1HB471K	470PF, 50V, ±10%, Ceramic	
C76	VCTYAT1EX153N	.015MFD, 25V, ±30%, Semiconductor	
C77	VCTYAT1EX153N	.015MFD, 25V, ±30%, Semiconductor	
C78	VCCSPA1HL330J	33PF, 50V, ±5%, Ceramic	
C80	VCTYAT1EX103N	.01MFD, 25V, ±30%, Semiconductor	
C81	VCTYAT1EX103N	.01MFD, 25V, ±30%, Semiconductor	
C82	VCTYAT1EX103N	.01MFD, 25V, ±30%, Semiconductor	
C83	VCTYAT1EX103N	.01MFD, 25V, ±30%, Semiconductor	
C86	VCQSMV1HL151J	150PF, 50V, ±5%, Styrol	AB
C87	VCTYPA1EX333M	.033MFD, 25V, ±20%, Semiconductor	
C88	VCCSAT1HL470J	47PF, 50V, ±5%, Ceramic	
C89	VCTYPA1EX223M	.022MFD, 25V, ±20%, Semiconductor	
C90	VCKYAT1HB331K	330PF, 50V, ±10%, Ceramic	
C91	VCTYAT1EX103N	.01MFD, 25V, ±30%, Semiconductor	
C92	VCTYAT1EX103N	.01MFD, 25V, ±30%, Semiconductor	
C103	VCTYAT1EX822K	.0082MFD, 25V, ±10%, Semiconductor	
C104	VCTYAT1EX562K	.0056MFD, 25V, ±10%, Semiconductor	
C105	VCKYAT1HB102K	.001MFD, 50V, ±10%, Ceramic	
C106	VCKYAT1HB102K	.001MFD, 50V, ±10%, Ceramic	
C107	VCTYPA1EX563K	.056MFD, 25V, ±10%, Semiconductor	
C108	VCTYPA1EX563K	.056MFD, 25V, ±10%, Semiconductor	
C109	VCTYPV1EX823K	.082MFD, 25V, ±10%, Semiconductor	
C111	VCKYAT1HB821K	820PF, 50V, ±10%, Ceramic	
C112	VCKYAT1HB821K	820PF, 50V, ±10%, Ceramic	
C113	VCTYAT1HV152K	.0015MFD, 50V, ±10%, Semiconductor	
C114	VCTYAT1HV152K	.0015MFD, 50V, ±10%, Semiconductor	
C117	VCTYAT1HV272K	.0027MFD, 50V, ±10%, Semiconductor	
C118	VCTYAT1HV272K	.0027MFD, 50V, ±10%, Semiconductor	
C121	VCCSAT1HL470J	47PF, 50V, ±5%, Ceramic	
C122	VCCSAT1HL470J	47PF, 50V, ±5%, Ceramic	
C123	VCKYAT1HB102K	.001MFD, 50V, ±10%, Ceramic	
C124	VCKYAT1HB102K	.001MFD, 50V, ±10%, Ceramic	
C125	VCTYPA1EX472M	.0047MFD, 25V, ±20%, Semiconductor	
C126	VCTYPA1EX472M	.0047MFD, 25V, ±20%, Semiconductor	
C127	VCTYPA1EX123K	.012MFD, 25V, ±10%, Semiconductor	
C128	VCTYPA1EX123K	.012MFD, 25V, ±10%, Semiconductor	
C135	VCTYAT1EX562M	.0056MFD, 25V, ±20%, Semiconductor	
C136	VCTYAT1EX562M	.0056MFD, 25V, ±20%, Semiconductor	
C137	VCTYPA1EX563K	.056MFD, 25V, ±10%, Semiconductor	
C138	VCTYPA1EX563K	.056MFD, 25V, ±10%, Semiconductor	
C139	VCTYPA1NX104M	.1MFD, 12V, ±20%, Semiconductor	
C140	VCTYPA1NX104M	.1MFD, 12V, ±20%, Semiconductor	
C141	VCTYPA1EX562M	.0056MFD, 25V, ±20%, Semiconductor	
C142	VCCSAT1HL101J	100PF, 50V, ±5%, Ceramic	

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
C143	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C145	VCTYAT1HV182K	.0018MFD, 50V, ±10%, Semiconductor	
C155	VCTYAT1EX103M	.01MFD, 25V, ±20%, Semiconductor	
C156	VCTYAT1HX222N	.0022MFD, 50V, ±30%, Semiconductor	
C175	VCTYPV1EX104M	.1MFD, 25V, ±20%, Semiconductor	
C181	VCTYPA1NX104M	.1MFD, 12V, ±20%, Semiconductor	
C182	VCTYPA1NX104M	.1MFD, 12V, ±20%, Semiconductor	
C189	VCTYPA1EX223M	.022MFD, 25V, ±20%, Semiconductor	
C190	VCTYPA1EX223M	.022MFD, 25V, ±20%, Semiconductor	
C191	VCTYAT1CY223N	.022MFD, 16V, ±30%, Semiconductor	
C192	VCTYPU1EX563K	.056MFD, 25V, ±10%, Semiconductor	
C198	VCTYPA1EX393K	.039MFD, 25V, ±10%, Semiconductor	
C199	VCTYPA1EX393K	.039MFD, 25V, ±10%, Semiconductor	
⚠C301	VCKZPU1HF104Z	.1MFD, 50V, +80 −20%, Ceramic	
⚠C302	VCKZPU1HF104Z	.1MFD, 50V, +80 −20%, Ceramic	
⚠C303	VCKZPU1HF104Z	.1MFD, 50V, +80 −20%, Ceramic	
⚠C304	VCKZPU1HF104Z	.1MFD, 50V, +80 −20%, Ceramic	

RESISTORS

(Unless otherwise specified resistors are 1/4W, ±5%, Carbon type.)

REF. NO.	PART NO.	DESCRIPTION	CODE
R1	VRD-ST2EE220J	22 ohm	AA
R8	VRD-ST2EE471J	470 ohm	AA
R10	VRD-ST2EE271J	270 ohm	AA
R13	VRD-ST2EE681J	680 ohm	AA
R18	VRD-ST2EE220J	22 ohm	AA
R19	VRD-ST2EE332J	3.3K ohm	AA
R22	VRD-ST2EE221J	220 ohm	AA
R23	VRD-ST2EE560J	56 ohm	AA
R25	VRD-ST2EE471J	470 ohm	AA
R26	VRD-ST2EE183J	18K ohm	AA
R31	VRD-ST2EE471J	470 ohm	AA
R32	VRD-ST2EE471J	470 ohm	AA
R34	VRD-ST2EE182J	1.8K ohm	AA
R37	VRD-ST2EE100J	10 ohm	AA
R40	VRD-ST2EE100J	10 ohm	AA
R45	VRD-ST2EE824J	820K ohm	AA
R46	VRD-ST2EE221J	220 ohm	AA
R48	VRD-ST2EE102J	1K ohm	AA
R50	VRD-ST2EE221J	220 ohm	AA
R58	VRD-ST2EE102J	1K ohm	AA
R68	VRD-ST2EE331J	330 ohm	AA
R69	VRD-ST2EE681J	680 ohm	AA
R70	VRD-ST2EE390J	39 ohm	AA
R72	VRD-ST2EE5R6J	5.6 ohm	AA
R74	VRD-ST2EE394J	390K ohm	AA
R76	VRD-ST2EE104J	100K ohm	AA
R108	VRD-ST2EE150J	15 ohm	AA
R109	VRD-ST2EE101J	100 ohm	AA
R110	VRD-ST2EE331J	330 ohm	AA
R111	VRD-ST2EE472J	4.7K ohm	AA
R112	VRD-ST2EE472J	4.7K ohm	AA
R113	VRD-ST2EE103J	10K ohm	AA
R114	VRD-ST2EE103J	10K ohm	AA
R115	VRD-ST2EE183J	18K ohm	AA
R116	VRD-ST2EE183J	18K ohm	AA
R117	VRD-ST2EE101J	100 ohm	AA
R118	VRD-ST2EE101J	100 ohm	AA
R119	VRD-ST2EE222J	2.2K ohm	AA
R120	VRD-ST2EE222J	2.2K ohm	AA
R121	VRD-ST2EE102J	1K ohm	AA
R122	VRD-ST2EE102J	1K ohm	AA
R123	VRD-ST2EE472J	4.7K ohm	AA
R124	VRD-ST2EE472J	4.7K ohm	AA
R125	VRD-ST2EE104J	100K ohm	AA
R126	VRD-ST2EE104J	100K ohm	AA
R127	VRD-ST2EE563J	56K ohm	AA
R128	VRD-ST2EE563J	56K ohm	AA
R129	VRD-ST2EE123J	12K ohm	AA
R130	VRD-ST2EE123J	12K ohm	AA
R131	VRD-ST2EE123J	12K ohm	AA
R132	VRD-ST2EE123J	12K ohm	AA
R133	VRD-ST2EE334J	330K ohm	AA
R134	VRD-ST2EE334J	330K ohm	AA
R135	VRD-ST2EE104J	100K ohm	AA
R136	VRD-ST2EE104J	100K ohm	AA
R139	VRD-ST2EE101J	100 ohm	AA
R141	VRD-ST2EE474J	470K ohm	AA
R142	VRD-ST2EE561J	560 ohm	AA
R144	VRD-ST2EE222J	2.2K ohm	AA
R145	VRD-ST2EE332J	3.3K ohm	AA
R146	VRD-ST2EE103J	10K ohm	AA
R147	VRD-ST2EE104J	100K ohm	AA
R148	VRD-ST2EE103J	10K ohm	AA
R149	VRD-ST2EE332J	3.3K ohm	AA
R151	VRD-ST2EE824J	820K ohm	AA
R152	VRD-ST2EE331J	330 ohm	AA
R153	VRD-ST2EE331J	330 ohm	AA
R157	VRD-ST2EE561J	560 ohm	AA
R158	VRD-ST2EE561J	560 ohm	AA
R159	VRD-ST2EE332J	3.3K ohm	AA
R160	VRD-ST2EE332J	3.3K ohm	AA
R166	VRD-ST2EE102J	1K ohm	AA
R167	VRD-ST2EE222J	2.2K ohm	AA
R168	VRD-ST2EE561J	560 ohm	AA
R169	VRD-ST2EE331J	330 ohm	AA
R170	VRD-ST2EE222J	2.2K ohm	AA
R172	VRD-ST2EE474J	470K ohm	AA
R174	VRD-ST2EE120J	12 ohm	AA
⚠R179	VRG-ST2EA100J	10K ohm, 1/4W, ±5%, Fusible	AB
R182	VRD-ST2EE103J	10K ohm	
R183	VRS-PT3AB680K	68 ohm, 1W, ±10%, Metal Oxide Film	AA
R184	VRD-ST2EE103J	10K ohm	AA
R187	VRD-ST2EE102J	1K ohm	AA
R188	VRD-ST2EE102J	1K ohm	AA
R189	VRD-ST2EE121J	120 ohm	AA
R190	VRD-ST2EE121J	120 ohm	AA
R192	VRD-ST2EE102J	1K ohm	AA
R193	VRD-ST2EE221J	220 ohm	AA
R194	VRD-ST2EE221J	220 ohm	AA
R195	VRD-ST2EE103J	10K ohm	AA
R196	VRD-ST2EE103J	10K ohm	AA
R197	VRD-ST2EE222J	2.2K ohm	AA
R198	VRD-ST2EE331J	330 ohm	AA
R199	VRD-ST2EE331J	330 ohm	AA
R200	VRD-ST2EE331J	330 ohm	AA

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
R201	VRD-ST2EE0R5J	.5 ohm	AA
R202	VRD-ST2EE0R5J	.5 ohm	AA
R205	VRD-ST2EE101J	100 ohm	AA
R206	VRD-ST2EE101J	100 ohm	AA
R207	VRD-SU2EE101J	100 ohm	AA
R208	VRD-SU2EE101J	100 ohm	AA
R209	VRD-SU2EE103J	10K ohm	AA
R210	VRD-SU2EE103J	10K ohm	AA

MECHANICAL PARTS

REF. NO.	PART NO.	DESCRIPTION	CODE
001	JKNBM0326AFSA	Key, Pause	AE
002	JKNBM0327AFSA	Key, Fast-forward	AE
003	JKNBM0328AFSA	Key, APSS Cut	AE
004	JKNBM0329AFSA	Key, Rewind	AE
005	JKNBM0330AFSA	Key, Playback	AE
006	JKNBM0331AFSA	Key, Record	AE
007	JKNBM0332AFSA	Key, Stop	AE
008	KCOUB0091AFZZ	Digital Tape Counter	AK
009	LANGF0537AFZZ	Bracket, Plunger	AF
010	LANGF0538AFZZ	Bracket, Flywheel	AC
011	LBSHS0001AG00	Cushion Rubber, Motor	AA
012	LBSHZ0054AFZZ	Collar, Auto Stop Actuating Lever	AA
013	LCHSM0326AFZZ	Main-chassis	
014	LCHSS0148AFZZ	Sub-chassis	
015	LX-BZ0219AFFD	Screw, Motor	AA
016	LX-WZ5018AGZZ	Washer, φ2.1	AA
017	LX-WZ5020AGZZ	Washer, φ1.7	AA
018	LX-WZ5037AGZZ	Washer, φ2.6	AA
019	LX-WZ9053AFZZ	Washer, Capstan Oil Cut	AA
020	MLEVF0802AFZZ	Lever, Pause Lock	AB
021	MLEVF0817AFFW	Lever, Auto Sotp Killer	AC
022	MLEVF0989AFZZ	Lever, Playback	AC
023	MLEVF0990AFZZ	Lever, APSS Cut	AC
024	MLEVF0991AFZZ	Lever, Rewind	AC
025	MLEVF0992AFZZ	Lever, Fast-forward	AC
026	MLEVF0993AFZZ	Lever, Stop	AC
027	MLEVF0994AFZZ	Lever, Record	AC
028	MLEVF0995AFZZ	Lever, Pause	AC
029	MLEVF0996AFZZ	Lever, Lock Release	AC
030	MLEVF0997AFZZ	Lever, APSS	AD
031	MLEVF0998AFZZ	Lever, Funtion Lever Lock	AD
032	MLEVF0999AFZZ	Lever, APSS Lock	AD
033	MLEVF1000AFZZ	Lever, Sub-chassis Return	AB
034	MLEVF1003AFZZ	Lever, Record Safety	AC
035	MLEVP0110AFZZ	Lever, Auto Stop Actuating	AC
036	MLEVP0115AFZZ	Lever, Brake	AC
037	MLEVP0163AFZZ	Lever, Cassette Holder Lock	AB
038	MLEVP0164AFZZ	Lever, Erase Proof	AB
039	MLEVP0165AFZZ	Lever, Fast-forward/Rewind Shift	AB
040	MSPRC0031AGMN	Spring, Head Azimuth Adjust	AA
041	MSPRC0161AFFJ	Spring, APSS Lock Lever	AA
042	MSPRC0163AFFJ	Spring, Stop/Eject Lever, APSS Cut Lever, Pause Lever	AA
043	MSPRC0164AFFJ	Spring, Function Lever Lock Lever, Record Lever, Rewind Lever, Fast-forward Lever	AA
044	MSPRC0167AFFJ	Spring, Lock Release Lever	AA
045	MSPRC0173AFFJ	Spring, Plunger	AA
046	MSPRC0200AFZZ	Spring, Palayback Lever	AB
047	MSPRD0182AFFJ	Spring, Cassette Holder Lock Lever	AA
048	MSPRD0185AFFJ	Spring, Pause Lock Lever	AA
049	MSPRD0187AFFJ	Spring, Auto Stop Actuating Lever Collar	AB
050	MSPRD0189AFFJ	Spring Fast-forward/Rewind Shift Lever	AA
051	MSRPD0190AFFJ	Spring, Fast-forward/Rewind Shift Lever	AA
052	MSPRD0192AFFJ	Spring, Auto Stop Killer Lever	AA
053	MSPRD0233AFFJ	Spring, Over Stroke Absorbing	AA
054	MSPRD0234AFFJ	Spring, Pressure Roller	AA
055	MSPRD0235AFFJ	Spring, Fast-forward/Rewind Roller	AA
056	MSPRD0252AFFJ	Spring, Record Safety Lever	AB
057	MSPRD0253AFFJ	Spring, Brake Lever	AB
058	MSPRD0254ZFFJ	Spring, APSS Lever	AB
059	MSPRP0225AFFJ	Plate Spring, Sub-chassis	AB
060	MSPRP0226AFFJ	Plate Spring, Record Lever	AB
061	MSPRT0621AFFJ	Spring, Take-up Idler	AA
062	NBALS0052AFZZ	Steel Ball, φ2.5	AA
063	NBLTH0070AFZZ	Belt, Drive	AC
064	NBLTK0151AFZZ	Belt, Auto Stop	AB
065	NBLTK0152AFZZ	Belt, Digital Tape Counter	AC
066	NBRGC0061AFZZ	Bearing, Capstan	AE
067	NDAIR0138AFSA	Turntable, Take-up	AF
068	NDAIR0139AFSA	Turntable, Supply	AD
069	NDRM-0153AFZZ	Worm Wheel, Auto Stop	AE
070	NFLYC0079AFZZ	Flywheel	AG
071	NIDR-0068AFZZ	Idler, Take-up	AE
072	NPLYR0050AFZZ	Pulley, Take-up	AB
073	NPLYR0060AFZZ	Pulley, Worm	AE
074	NROLW0012AFZZ	Roller, Fast-forward/Rewind	AG
075	NROLX0013AFZZ	Gear, Rewind	AB
076	NROLY0030AFZZ	Pressure Roller Assembly	AE
077	NSFTN0004AFFW	Shaft, Auto Stop Worm Wheel	AC
078	PCUSG0026AG00	Rubber, Brake Lever	AA
079	PGIDM0064AFZZ	Guide, Atuo Stop Actuating Lever	AB
080	QCNW-0645AFZZ	Terminal Tip with Lead	AD
081	RHEDA0073AFZZ	Head, Erase	AG
082	RHEDH0082AFZZ	Head, Record/Playback	AP
083	RMOTV0080AFZZ	Motor with Connecting Socket (CNS103)	AU
084	LSTWC2001AFZZ	Stop Ring, φ2	
085	LSTWC3002AFZZ	Stop Ring, φ3	
086	LSTWC4004AFZZ	Stop Ring, φ4	
087	LX-BZ0285AFFD	Screw, Head	AA

MISCELLANEOUS

REF. NO.	PART NO.	DESCRIPTION	CODE
101	GCAB-1036AFSA	Front Cabinet Assembly	AY
101-1	HPNLD1188AFSA	Window, Dial Scale	AF
101-2	PFLT-0398AF00	Felt, Speaker (Tweeter)	AA
101-3	PFLT-0393AF08	Felt, Speaker (Woofer)	AB
102	GCABB1519AFSA	Back Cabinet	AW
103	GCOVH1171AFSB	Cover, AC Power Supply Socket	AB
104	GFTAB1116AFSB	Lid, Battery Compartment	AC
105	GFTAC1116AFSA	Window, Cassette Holder	AD
106	GFTAC1117AFSA	Holder, Cassette	AH
107	HDECB0122AFSA	Indication Plate, Model	AD
108	HDALM0215AFSA	Plate, Dial Scale	AL
109	HINDM1368AFSA	Specification Label, with Indication: MADE IN JAPAN (GF-6060H)	AC
	HINDP0194AFSA	Specification Label, without Indication: MADE IN JAPAN (GF-6060H)	AC
	HINDM1369AFSA	Specification Label (GF-6060E)	AC

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
110	HINDM1370AFSA	Decoration Plate, Cassette Holder	AF
111	HINDM1355AFSA	Indication Plate, Mechanism Control	AB
113	HSSND0263AFSA	Dial Pointer	AC
114	JHNDG1069AFSB	Handle	AP
115	JKNBK0195AFSB	Knob, Tuning Control	AF
116	JKNBK0196AFSB	Knob, Fine Tuning Control	AE
117	JKNBK0197AFSB	Knob, Volume Control, Balance Control, Tone Control	AD
118	JKNBK0198AFSA	Knob, Band Selector	AE
119	JKNBP0099AFSB	Knob, Tape Selector, Function Selector, FM Mode Selector	AB
120	LANGA0078AFFW	Holder, Socket	AB
121	LANGR0495AFFW	Bracket, Telescopic Rod Antenna	AB
122	LANGR0496AFFW	Bracket, Telescopic Rod Antenna	AB
123	LHLDF1230AFZZ	Frame	AM
124	LHLDF1231AFZZ	Holder, P.W.B.	AB
125	LHLDL1050AFSA	Holder, Handle	AB
126	LHLDW1075AFZZ	Wire Holder	AA
127	LHLDW9003CEZZ	Wire Holder	AA
128	LHLDZ1102AFSA	Holder, LED	AC
129	LX-BZ0286AFFF	Screw, Special	AA
130	LX-CZ0002AFZZ	Screw, $\phi4$ x 70mm	
132	LX-WZ1055AFZZ	Washer, Handle Retaining	AA
133	MLEVP0166AFZZ	Lever, Record Interlocking	AC
134	MSPRC0190AFFJ	Spring, Battery	AC
135	MSPRC0192AFFJ	Spring, Battery	AB
136	MSPRD0237AFFJ	Spring, Cassette Holder Opening	AB
137	MSPRP0227AFFJ	Plate Spring, Cassette Holder	AA
138	MSPRT0003AGFW	Spring, Dial Cord	AA
139	NDRM-0159AFZZ	Drum, Dial Cord	AC
140	NPLYB0050AFZZ	Pulley, Dial Cord	AA
141	NPLYB0051AFZZ	Pulley, Dial Cord	AA
142	PCOVM1057AF00	Felt, Tape Selector Switch, Function Selector Switch, FM Mode Selector Switch	AA
143	PCOVZ9055AF00	Felt, 18mm x 15mm	AA
144	PCUSG0111AF00	Cushion, Dial Scale Plate	AA
145	PCUSG0113AF00	Cushion, LED P.W. Board, 16mm x 9mm x 10mm	AA
146	PCUSG0114AF00	Cushion, 16mm x 8mm x 2.5mm	AA
147	PCUSU0092AG00	Cushion, Battery Compartment Lid	AA
149	PCUSU0238AFZZ	Cushion, 20mm x 10mm x 7mm	AA
150	PFLT-0127AF00	Felt, Battery Compartment	AA
151	PFLT-0339AF00	Felt, Front Cabinet, Cassette Holder Plate Spring	AA
154	PGUMR0051AF00	Rubber, Cassette Holder	AA
155	PRDAR0214AFFW	Heat Sink, Power IC (IC103)	AB
156	PSLDM7119AFZZ	Shield Plate	AC
157	PTPEC0005AG00	Ribbon, Battery Removal	AB
158	QANTR0114AFZZ	Telescopic Rod Antenna	AM
160	QCNW-0646AFZZ	4-Core Wire, 80mm	AA
161	QCNW-0639AFZZ	9-Core Wire, 180mm	AD
162	QCNW-0640AFZZ	9-Core Wire, 100mm	AC
163	QCNW-0641AFZZ	5-Core Wire, 140mm	AB
164	QHWS-4010AGFN	Lug	
165	QLUGP0111CEFW	Lug Terminal, 13mm	AA
166	QFSHD2051AFZZ	Fuse Holder	AA

REF. NO.	PART NO.	DESCRIPTION	CODE
167	QTANB9108AFFN	Terminal, Battery (+)	AB
168	RMICC0076AFZZ	Built-in Microphone with Rubber	AF
169	TLABZ0130AFZZ	Decoration Sheet, Cassette Compartment	
170	XWVSE43-05000	Lock Washer, $\phi4$	
171	Not Available	Bracket, Controls (Part of VR101)	–
CNP101	QCNCM172CAFZZ	Plug, 3-pin	AB
CNP102	QCNCM176GAFZZ	Plug, 7-pin	AC
CNP103	QCNCM171BAFZZ	Plug, 2-pin	AB
CNS101	QCNW-0637AFZZ	Socket, 3-pin (Tip and Lead)	AE
CNS102	QCNW-0636AFZZ	Socket, 7-pin (Tip and Lead)	AG
CNS103	Not Available	Socket, 2-pin (Part of Motor)	–
J103/ J104/ J105/ J106	QJAKZ0093AFZZ	Socket Assembly; J103: Mixing Microphone J104: Headphones J105: EXT. Speaker (R-ch) J106: EXT. Speaker (L-ch)	AP
J101/ J102/ J107/ SO101	QJAKZ0094AFZZ	Socket Assembly; J101: EXT. Microphone (R-ch) J102: EXT. Microphone (L-ch) J107: Remote Control SO101: Record/Playback (AMP), DIN	AL
⚠SO301/ ⚠SW301/ ⚠J301	QSOCE0563AFZZ	Socket, AC Power Supply with AC/DC Switch (SW301) and EXT. DC Power Supply Socket (J301)	AH
SW1 (A ~ J)	QSW-R0171AFZZ	Switch, Band Selector	AN
SW2	QSW-B0126AFZZ	Switch, FM Mode Selector	AF
SW101 (A ~ D)	QSW-B0125AFZZ	Switch, Function Selector	AG
SW102 (A ~ L)	QSW-P0249AFZZ	Switch, Record/Playback	AG
SW103 (A ~ D)	QSW-B0127AFZZ	Switch, Tape Selector	AG
SW104	QSW-S0267AFZZ	Switch, Beat Cancel	AD
SW201	QSW-F0049AGZZ	Switch, Main	AE
SW202	QSW-F0135AFZZ	Switch, APSS	AC
SW203	QSW-F0135AFZZ	Switch, APSS Cut	AC
SOL1	RPLU-0102AFZZ	Plunger	AH
SP1	VSP0012PB328A	Speaker, R-ch Woofer	AQ
SP2	VSP0012PB328A	Speaker, L-ch Woofer	AQ
SP3	VSP00HNTX16ZC	Speaker, R-ch Tweeter	AH
SP4	VSP00HNTX16ZC	Speaker, L-ch Tweeter	AH
⚠F301	QFS-C102CAGNI	Fuse, T1.0A	AE
⚠	QACCK0050AFZZ	AC Supply Lead (GF-6060H) Refer to "TABLE 1" on Last Page	AL
⚠	QACCK0051AF00	AC Supply Lead (GF-6060H)	AL
⚠	QACCB0003AG0V	AC Supply Lead (GF-6060E)	AK
	QCNW-0674AFZZ	Leads Assembly, Speaker	AE
	QCNE-0669AFZZ	Leads Assembly, Power P.W.B.	AC
	QCNW-0677AFZZ	Lead Assembly, Shield Plate	AC
	QPLGZ0152AFZZ	Plug, Erasing	AB
	SPAKA0607AFZZ	Packing Add. (Left)	AE
	SPAKA0608AFZZ	Packing Add. (Right)	AE
	SPAKC1409AFZZ	Packing Case, with Indication: MADE IN JAPAN (GF-6060H)	AK

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
	SPAKC1451AFZZ	Packing Case, without Indication: MADE IN JAPAN (GF-6060H)	
	SPAKC1410AFZZ	Packing Case (GF-6060E)	AL
	SSAKH0024AGZZ	Polyethylene Bag	AA
	TINSZ0192AFZZ	Operation Manual, Black Color (GF-6060H)	AK
	TINSZ0221AFZZ	Operation Manual, Blue Color (GF-6060H)	AE
	TINSE0643AFZZ	Operation Manual (GF-6060E)	AC
	UBATU0009AGZZ	Battery, UM-1	AA
	PCUSU0128AFZZ	Cushion, L2, L3 and L4	

REF. NO.	PART NO.	DESCRIPTION	CODE
	P.W.B. Assembly (Not replacement item)		
	DUNTK0051AF03 (Combined Assembly)	Main LED Socket	–
	DUNTR0145AF03 (Combined Assembly)	Tuner (GF-6060H)	–
	DUNTR0145AF04 (Combined Assembly)	Tuner (GF-6060E)	–

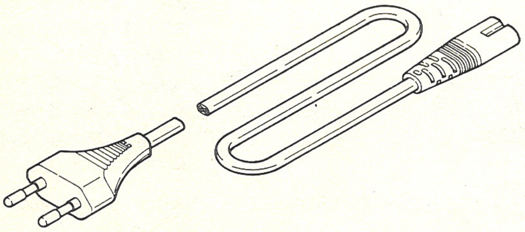
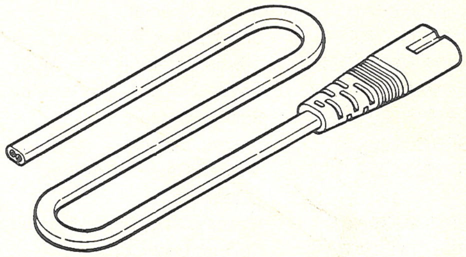
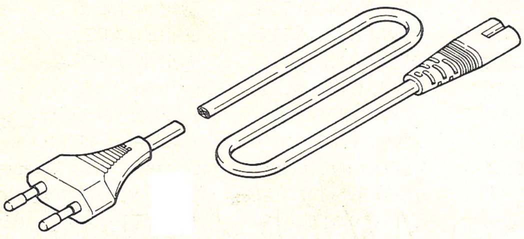
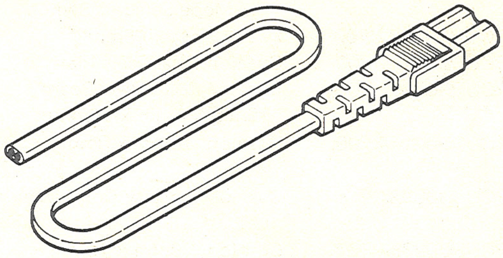
GF-6060H	GF-6060E
QACCK0050AFZZ (Grey) 	QACCB0003AG0V 
QACCK0051AF00 (Black) 	

TABLE 1 AC SUPPLY LEADS

A8003-2.85MNK
Printed in Japan